AEROSOL AGE

THE MAGAZINE OF PRESSURE PACKAGING

IN THIS ISSUE:

- New Package for "Glade"
- Formulation of Aerosol Paints
- V.C.A. Goes "Public"
- Meeting of International Congress
- Briti.h Dip Tube Maker
- Precision Shifts License Pact

NOVEMBER, 1961

Aerosol Insecticides that pack the most potent punch are packed with

PYRENONE*

Insecticide applications and formulation requirements for the home, garden, farm and industry, differ from one container to another... from one need to another.

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1 Remove spray tips from both valves.

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THIS MONTH'S COVER

A new concept in aerosol packaging of room deodorants was introduced last month by S. C. Johnson & Son, Inc., for its "Glade Mist." Valve-integrated caps by Valve Corp. of America and Crown cans to give distinctive room deodorant outer packaging for new water-base formulation. For more on this new product, see story on page 29. For more on VCA, see story on page 20.

NOVEMBER, 1961 VOL. 6, No. 11

AEROSOL AGE

The magazine of pressure packaging

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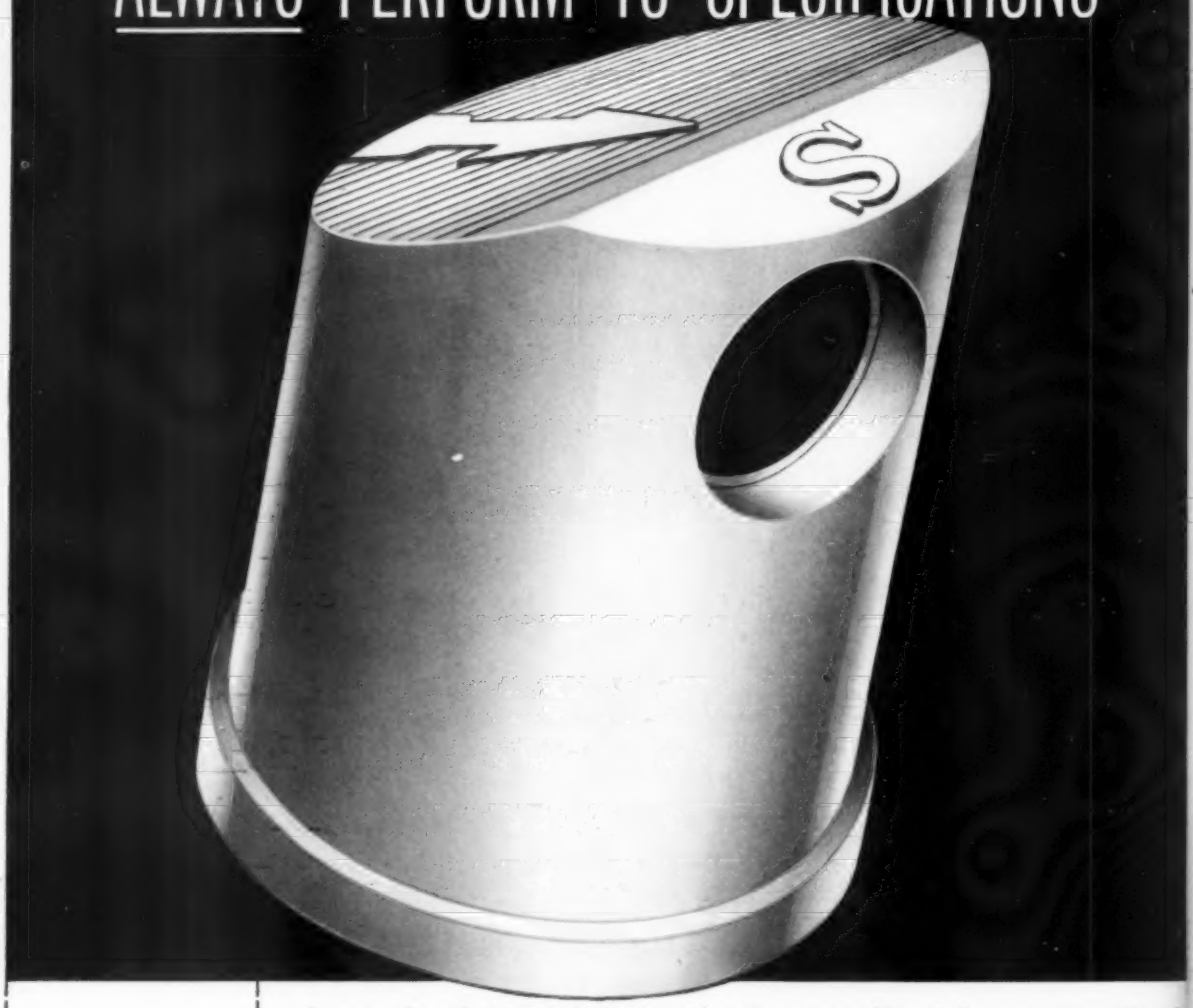

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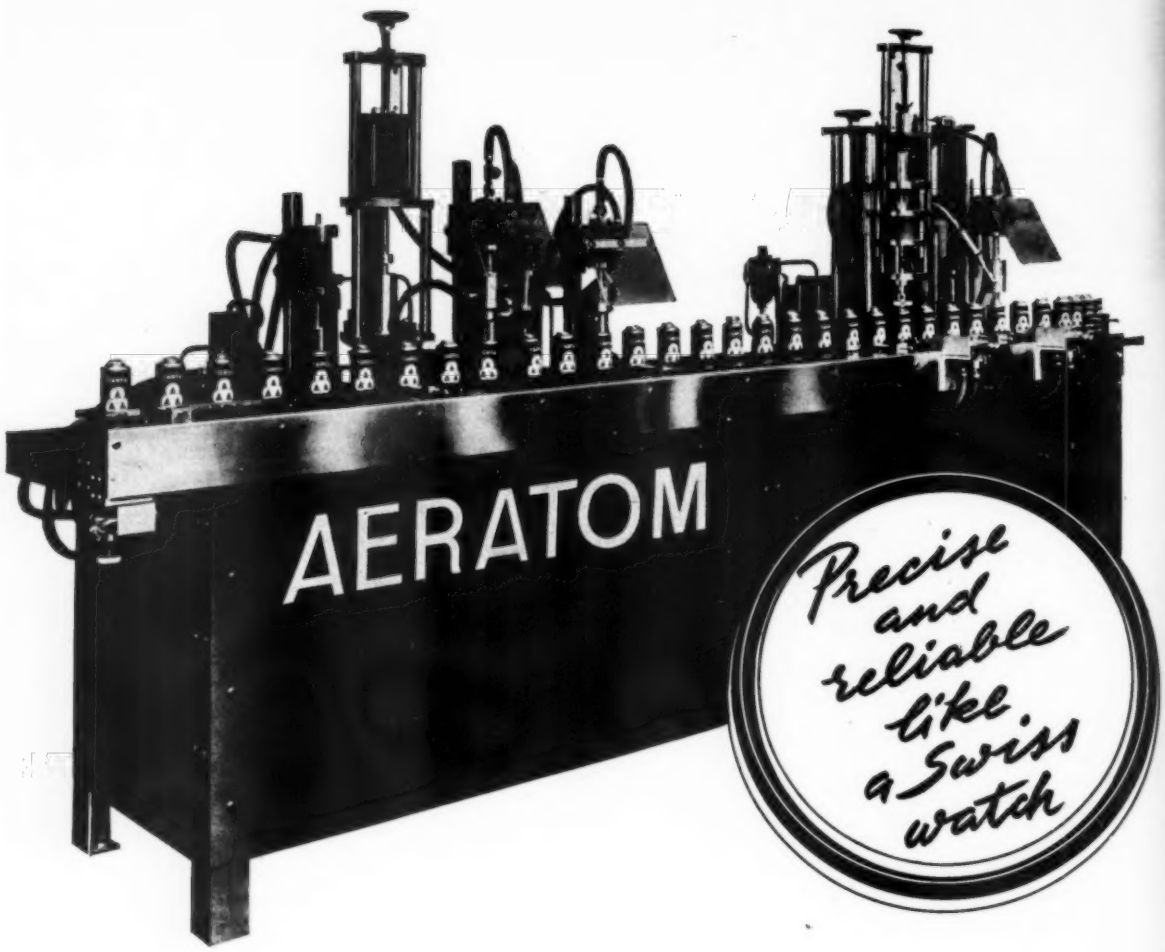

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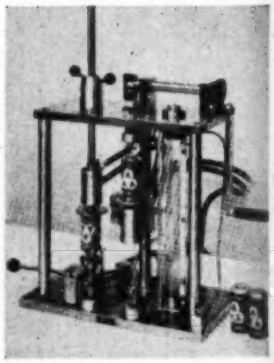

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- A-8 Aerosol Antiperspirant Studies
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- A-14 Development and Problems in Cosmetic Aerosols
- A-16 Aerosol Coating Compositions
- A-48 The Formulation of Aerosol Alkyd Enamels
- B-18F U. S. Patents of Interest in Connection with Aerosol Food Products
- FA-13 The Formulation of Aerosol Coating Compositions with "Freon" Fluorinated Hydrocarbon Propellents
- FA-17A Aerosol Powders
- FA-18 Propellents for Low-Pressure Cosmetic Aerosols
- KTM-20 Aerosol Antitarnish Formulation

ANALYTICAL
- A-11 The Analysis of Moisture in Aerosol Formulations
- B-8 Quality Specifications and Methods of Analysis for the "Freon" Fluorinated Hydrocarbon Refrigerants
- B-21 Procedure for Sampling "Freon-12" and "Freon-22" from Tank Cars
- B-23 Moisture Determination in "Freon" Fluorinated Hydrocarbon by Karl Fischer Titration
- B-25 New Instrument for the Moisture Analysis of "Freon" Fluorinated Hydrocarbons
- B-27 Operation and Maintenance of Model W Electrolytic Moisture Analyzer
- B-28 Quantitative Determination of Fluorinated Hydrocarbons by Gas Chromatography
- B-37 A Guide to Methods of Analysis of "Freon" Refrigerants
- FA-23 Determination of "Freon" Propellent Composition with a Pressure Pycnometer
- RT-6 Moisture Determination in Refrigerant-Oil Solutions by Karl Fischer Method

LABORATORY TECHNIQUES
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- FA-10 Apparatus for Pressure Loading Aerosol Containers in the Laboratory
- KTM-11 A Method for Measuring the Vapor Pressure of Aerosol Products

CORROSION
- A-19 Corrosion in Aqueous and Alcoholic Aerosol Systems
- A-51 Mechanism of the Reaction Between Trichloromonofluoromethane and Ethyl Alcohol
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- C-5 Large Vapor Pressure Charts of "Freon-12"/"Freon-11" and "Freon-12"/"Freon-114" Solutions
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- A-15380 Aerosol Market Report

FREON® propellents

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A-14	A-11	FA-23	FA-6	FA-4	B-10A	B-33	KTM-14	C-4
A-16	B-8	RT-6	A-45	FA-21	B-18	FA-7	B-7	C-5
A-48	B-21	A-17	A-46	FA-25	B-19	FA-22	B-14	C-5A
B-18F	B-23	FA-10	FA-15	A-50	B-26	FA-26	B-14A	C-6A
FA-13	B-25	KTM-11	A-47	A-52	B-29A	B-3	B-17	S-16
FA-17A	B-27	A-19	FA-24	A-54	B-30	B-11C	FA-3	A-13168
								A-15380

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Company_____

Company Address_____

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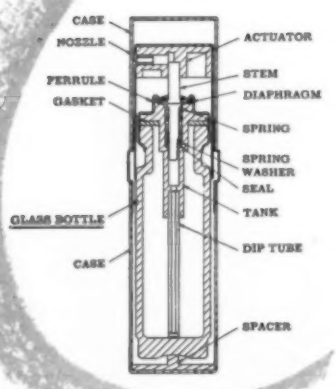
A sales "lure" for Christian Dior *with an assist by* VCA

New, original spray perfume dispenser builds brand name loyalty and profits for years to come.



The profitable spray perfume market was an easy "lure" for Christian Dior with a new package conceived by the technical service departments of Christian Dior Perfumes and VCA.

Now, because of a unique patented actuator device, Christian Dior's beautiful silver toned spray perfume package takes only Christian Dior glass refills. Thus, purchasers of the original package become Dior customers for years to come, resulting in continued, high profits for all.

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Flatten flyers, kill crawlers and spark sales . . . faster, by basing your aerosol insecticide formulations on LETHANE® 384. The faster insects are knocked down—the faster sales go up. And when you put LETHANE speed in your aerosol, you also build in an important economy factor. You can save up to 3¢ a can! Besides high killing power, you are assured of safety, stability, satisfactory odor and compatibility with insecticide aerosol ingredients. Make your own test. Prove to yourself that you can reduce costs and increase the effectiveness of your aerosols. Write today for test samples, technical data and formulating assistance.

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INDUSTRY MEETING CALENDAR

Federation of Societies for Paint Technology, annual meeting, Shoreham and Sheraton-Park hotels, Washington, D. C.....Nov. 2-4

Packaging Machinery Manufacturers Institute, Cobo Hall, Detroit, Mich. .....Nov. 7-10

Chemical Industries Exposition, Coliseum, New York Nov. 27-Dec. 1

Society of Cosmetic Chemists, annual meeting, Biltmore Hotel, New York .....Nov. 28

Toilet Goods Association, Meeting of Scientific Section, Waldorf-Astoria, New York, N. Y.....Nov. 29

Chemical Specialties Manufacturers Association, 48th Annual Meeting, Roosevelt Hotel, New York, N. Y. .....Dec. 4-6

Drug, Chemical & Allied Trades Association, Annual Dinner, Waldorf-Astoria, New York, N.Y...Mar. 1, 1962

Chemical Specialties Manufacturers Association, meeting of board of governors and division executive boards, Penn-Sheraton Hotel, Pittsburgh, Pa.....Mar. 14-15, 1962

Chemical Specialties Manufacturers Association, 49th mid-year meeting, The Drake, Chicago ....May 14-16, 1962

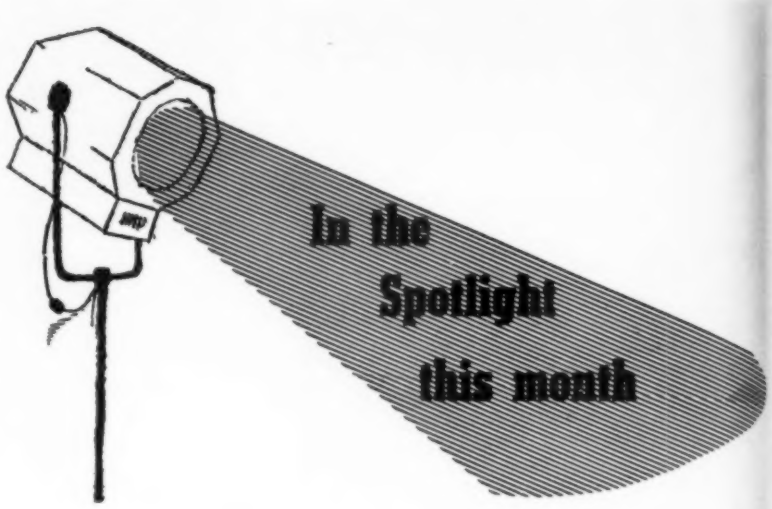
Toilet Goods Association, annual convention, Chateau Frontenac, Quebec, Canada....June 24-29, 1962

Chemical Specialties Manufacturers Association, 49th annual meeting, The Mayflower Hotel, Washington, D. C.....Dec. 3-5, 1962

•

Barnett Heads Allen Wrisley

James A. Barnett, a vice president of Purex Corp., parent company, has been elected president of Allen B. Wrisley Co., Chicago, wholly owned Purex subsidiary. He replaces Eugene F. Bertrand, who resigned. At the same time the company announced the election of Paul W. Skillman, formerly general sales manager, as vice president and marketing director.

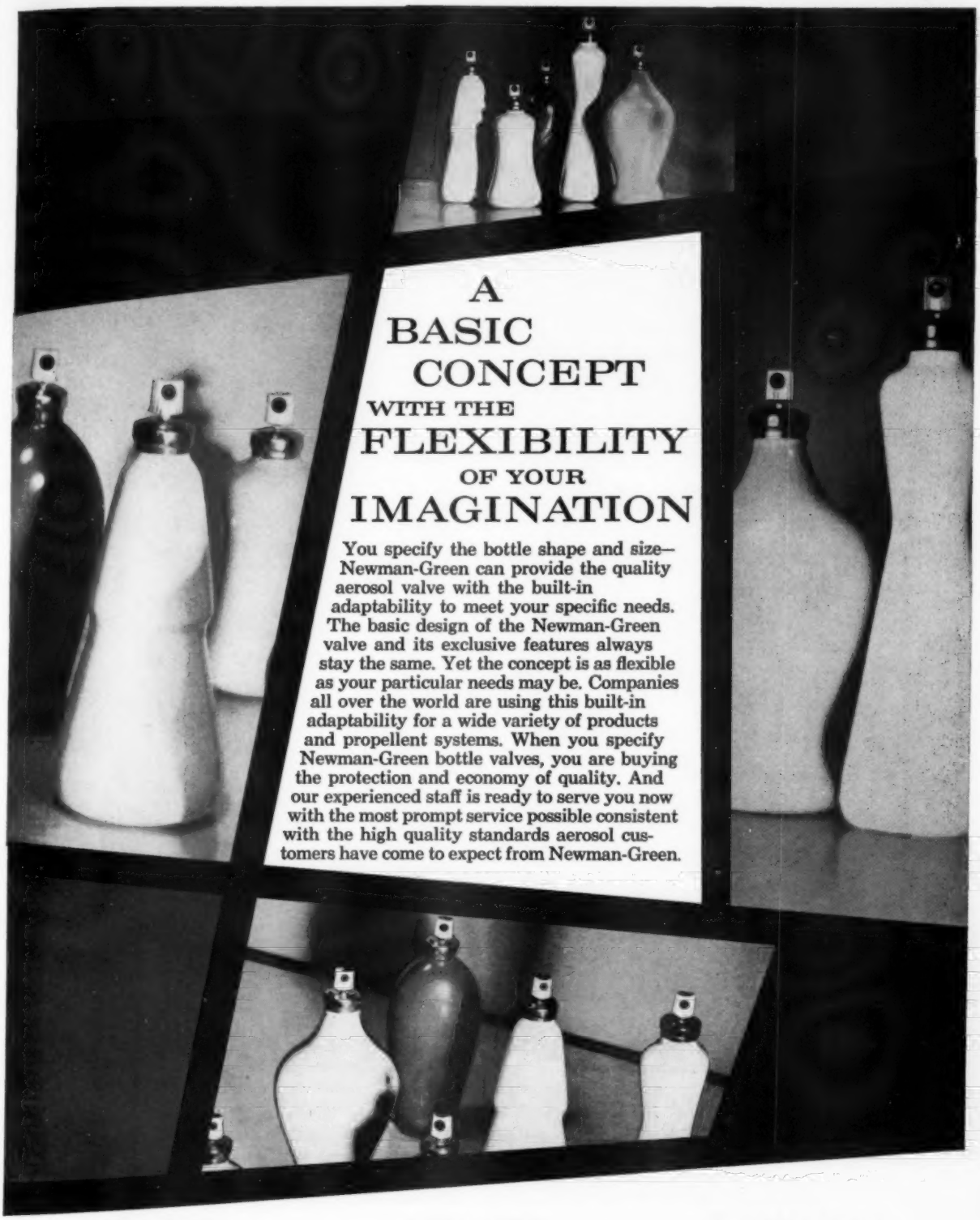


• **VCA "Goes Public"** . . . Continuing its series on the leading aerosol valve manufacturers, **Aerosol Age** this month concentrates on the Bridgeport company that made the news by becoming publicly owned. In a picture story beginning on page 20, the company's history, customer philosophy, and key personnel are described in detail.

• **Tamper-Proofing the Aerosol Package** . . . An examination of the recent history of tamper-proofing devices for the aerosol package, coupled with an analysis of the new "breakaway" inner valve seals, is the highlight of this issue of **Aerosol Age**. The story, complete with pictures, begins on page 30.

• **Johnson Introduces New "Glade" Package** . . . Product reformulation and a brand-new package are expected by Johnson officials to "open up" the room deodorant market. Article describing new package components and Johnson's views on product appears on page 26.

• **Aerosol Congress Reports Industry is Booming** . . . The long-awaited Federation of European Aerosol Associations holds an excellently attended Congress in Lucerne, Switzerland. One of the technical papers appears on page 27 and on page 24 is a complete report on the highlights of the meeting, the aerosol package contests and the packaging exhibit held in conjunction with it.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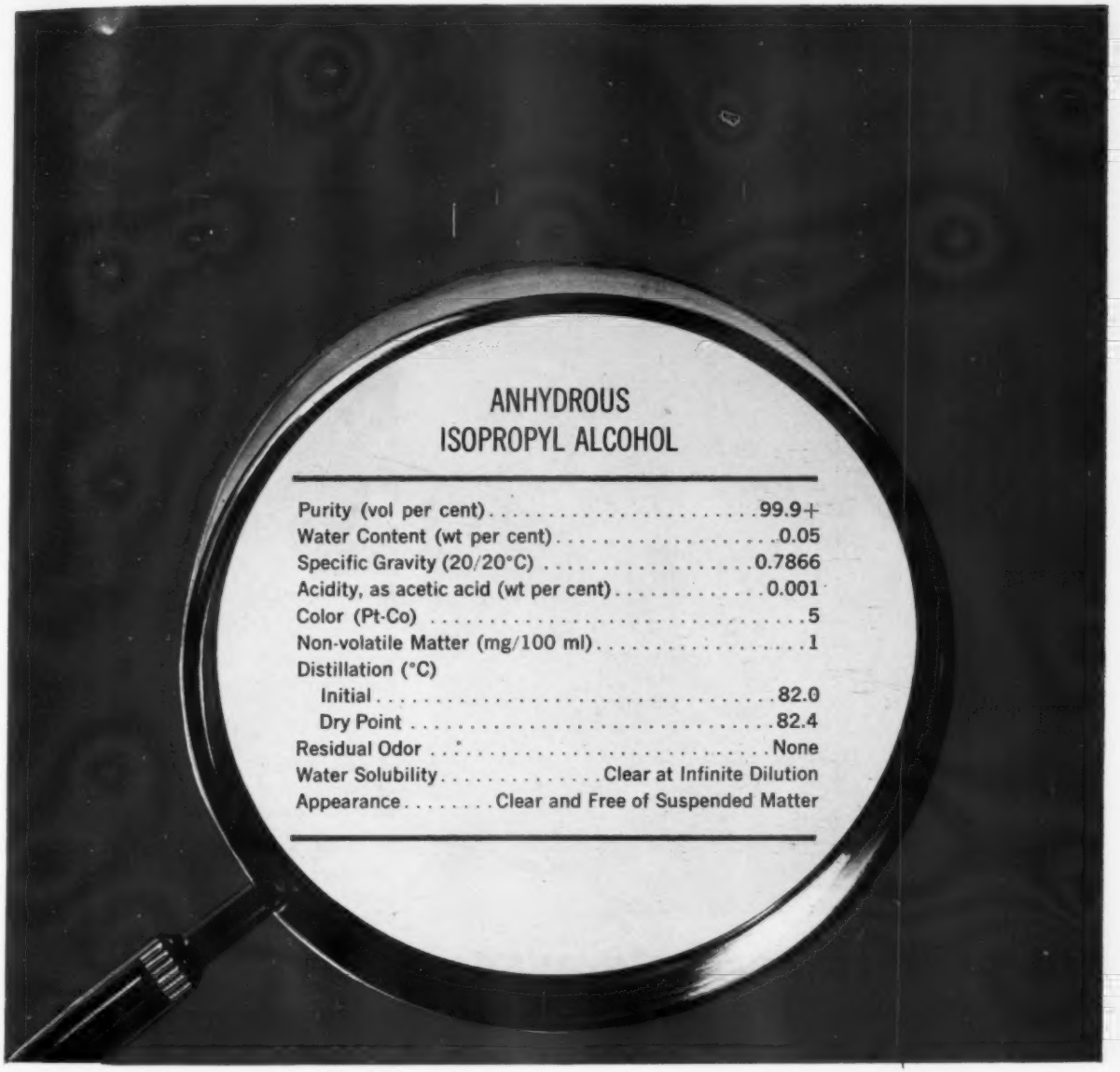
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Purity (vol per cent) . . . . . 99.9+
Water Content (wt per cent) 0.05
Specific Gravity (20/20°C) 0.7866
Acidity, as acetic acid (wt per cent) 0.001
Color (Pt-Co) 5
Non-volatile Matter (mg/100 ml) 1
Distillation (°C)
Initial 82.0
Dry Point 82.4
Residual Odor . . . . . None
Water Solubility . . . . . Clear at Infinite Dilution
Appearance . . . . . Clear and Free of Suspended Matter

Take a Look at Typical Inspections for Enjay Anhydrous Isopropyl Alcohol...

Choose high purity Enjay Anhydrous Isopropyl Alcohol for your aerosol formulations. The inspections above show the high quality of this Enjay Alcohol. Where extra dryness and rigidly controlled odor are important factors in your formulations, Enjay Anhydrous Isopropyl Alcohol is the answer to your needs. Shipments can be made from conveniently located points in tank car or tank truck quantities.

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A DIVISION OF HUMBLE OIL & REFINING COMPANY

ENJAY

Sales secret: Silicones

Silicones in aerosols assure user satisfaction, repeat sales

Countless products that were once brushed on, daubed on, poured on, dusted on, or wiped on have been adapted to aerosol packaging for easy spray application. But today's alert consumer looks for more than fast, convenient, no-mess application. Performance is the real key to repeat sales, and *better* performance is what Dow Corning Silicones deliver.

In hair sprays, for example, silicone fluids provide more manageability, resist the effects of humidity. Hair stays softer, more lustrous; is easier to set and hold in place. *In skin preparations,* silicones repel water and water-borne irritants; prevent washing away. Yet the skin stays soft and fresh; is never left greasy.

Spray starch ends the fuss and work of old hard-to-make household starch. Now add a small amount of Dow Corning silicone emulsion — and ironing itself is easier. The silicones in the spray condition the iron's sole plate so the iron glides smoothly and easily; starch won't burn and stick to the plate.

Polishes last longer when formulated with Dow Corning Silicones. Spreading is more even; protective films form faster. And most important, a deeper, richer gloss is attained with minimum "elbow grease".

Silicones in aerosols solve many "sticky" problems for industry, too. Heat-stable silicone release agents make parts pop out of molds quickly, easily. Rejects, downtime and maintenance costs are slashed.

It's really no secret the way silicone performance assures lasting satisfaction and brand preference. Formulators and fillers alike have ready access to the wealth of useful data Dow Corning chemists have compiled. If you're not using it, we suggest you do so soon.

For the latest, most complete information on silicones, write Dow Corning Corporation, Dept. 0223, Midland, Michigan.

first in silicones

Dow Corning

WHO
PUT
THAT
ETHYL ALCOHOL
DRUM
THERE?

YOU put it there, of course. Though it may not concern the youngster's mother, the tincture she's spraying—like many other pharmaceuticals in her medicine chest—very likely is formulated with ethyl alcohol bearing the U.S.I. label.

YOU put it there because your reputation is at stake every time she presses the valve on your product. You know your aerosol is only as good as the raw materials that go into it. So you specify alcohol of assured quality—U.S.I. pure anhydrous ethyl alcohol—for assured purity and absolute dryness in such aerosol formulations as tincture of methiolate, spray-on bandages, inhalants, nasal sprays, throat sprays, cough syrups. It's the brand hospitals have specified for over half a century.

YOU put that ethyl alcohol drum there because U.S.I.'s reputation safeguards your own.

Write on your company letterhead for the new catalog describing all U.S.I. ethyl alcohol products.

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REJECTS MAY BE THE REASON!

A high reject rate means dissatisfied consumers, and excessive costs. Defective units drain away your customers and reduce the value of your promotional dollars. When you reduce rejects you increase profits directly. So be sure, when you purchase aerosal valves for *your* product you have specified the best . . . PRECISION VALVES. PRECISION quality controls assure you of minimum rejects, maximum profits.

PRECISION VALVE CORPORATION
700 NEPPERHAN AVENUE, YONKERS, NEW YORK

EDITORIALS

A Growth in Maturity . . .

ALTHOUGH it is always difficult to assess a situation from a vantage point away from day-to-day marketing competition, the aerosol industry of late seems to us to be achieving a self-assurance, a definite maturity, which it lacked in past years. Petty technical arguments, sloppy packaging techniques, corner-cutting to save a few cents, personality differences based on long-standing feuds, and other manifestations of immaturity are becoming far less common.

This new sense of balance is especially evident in those public meetings at which aerosol technical papers are presented or symposia conducted. Within the last month, for instance, two well-attended meetings — one on each side of the Atlantic — seemed to reflect this maturity in the subject matter of the papers, the intelligent questions asked of the speakers, and the general atmosphere of the meetings themselves.

The Third International Aerosol Congress (reported briefly on page 24) may have been the most informative aerosol meeting ever held. The high caliber of the papers, the "UN atmosphere" of the multi-translation system, the friendly receptivity of the audience, all added to the good impression created for both registrants and guests. One sidelight: substantial U. S. industry attendance would seem to indicate that people on this side of the Atlantic are finally becoming alert to the implications of technical progress achieved by the European industry.

The second of these meetings was the National Packaging Forum held in New York, Oct. 18-20. One feature of this forum—which of necessity was quite diverse in its subject matter, was a panel discussion of a paper by J. P. Barrett, senior industrial engineer of S. C. Johnson & Son, Inc., on the subject: "Planning, Installing, and Operating a Pressure Packaging Line." Mr. Barrett's paper was outstanding in that it described in some detail how his company went about installing its own aerosol line. And later, a dozen or so intelligent questions were asked of Mr. Barrett and each was answered thoughtfully and with considerable skill.

Still another manifestation of this maturity is the care with which products are being market-tested prior to introduction on the consumer market. In part this may be due to the size of the companies which are becoming "aerosol oriented." The major cosmetic and pharmaceutical houses are understandably cautious about pushing a product too early, and this caution (although at times perhaps over emphasized) pays off in a growing respect for the aerosol by the consumer public.

Quality control has finally achieved the respect it deserves. Containers, valves, propellants and caps are painstakingly checked for appearance, function and/or general quality. Finished packages are spray tested now *as a matter of course*, and statistical controls of such factors as long-term propellant leakage have been refined to a point where they *really* contribute to the shelf-life of the product. Even package design, too long neglected as a merchandising tool, is improving through the influence of the annual CSMA Aerosol Package Contest and the suppliers.

All this should not be interpreted to mean that the industry can coast from here on in. These are *generalities* and should not provide cover for sloppiness or immaturity. For instance, one area in which the industry has not shown much enterprise is compliance with the Federal Hazardous Substances Labeling Law. Unless Congress acts quickly, all requirements of the law must be met by Feb. 1. It is past time to stop looking for a fairy godmother and get down to business.★

A corner of VCA's injection molding equipment, where actuators and other valve parts are fabricated from granular plastics.

Most of the company's dip tubing is extruded on this unit. Trough in center is used to cool hot tubing before it is wound.

Automatic equipment, such as these stem and rubber assembly machines, help produce up to 700,000 valves per day.

This specially built valve assembler, run by a single operator, turns out quality valves at high speeds.

VCA "Goes Public"

valve producer has come far by reliance on close customer relationships

EARLY last month, Valve Corp. of America, Bridgeport, Conn., a leading manufacturer of aerosol valves and components, passed a major milestone in its corporate growth. The company went from private to public ownership, with the issuance of 145,000 shares of common stock at an offering of $7.00 per share. Of this block, 75,000 shares were for the corporation and 70,000 shares for the stockholders.

The new financing, which will be used for expansion purposes, furthering automation, research and development, was done to permit the company to continue a growth pattern which has seen it expand at an even more rapid pace than the industry itself. A list of the firm's customers reads like a "Who's Who" of America's leading perfume, cosmetic, pharmaceutical, food, household and chemical industries. Such firms as Avon Products, Lanvin Parfumes, Revlon, Faberge, Chanel, S. C. Johnson, Boyle-Midway (subsidiary of American Home Products Corp.), Fuller Brush, Simoniz, and Stanley Home Products are among them.

According to Philip H. Sagarin, president of VCA since the firm's inception in 1949, the underlying factor behind the company's rise has been the close working relationship with its customers, coupled with the extent of technical services rendered. Over the years, he points out, VCA's expansion has been *vertical* in operation, in order to competitively maintain its high quality level. The company management found it could not depend entirely on outside sources for the quality that the industry demanded, and to maintain its competitive position was forced to manufacture its own components and develop and build many pieces of specialized equipment. A large molding department now produces all of its plastic parts and extrudes all of its dip tubing; fabricates its gaskets and manufactures most of its mounting cups.

By expanding in this direction, VCA was able to achieve complete control of manufacture, thus putting itself in a much better position than when sub-contractors *were* involved. Production remains at a high level, better and more accurate parts are produced, better service with surer time table delivery is possible. Today, VCA manufactures a complete variety of valves, actuators and containers, offering the customer a wide choice of styles and types. With the acquisition of additional investment funds, VCA expect to further expand in order to produce products in greater volume . . . competitively, efficiently and economically.

ONE KEY factor in VCA's rapid growth has been the identification of the firm with the metered valve. This device, which permits delivery of a measured amount of spray each time the package is actuated, has been instrumental in the development of the popular spray cologne, perfume, pharmaceutical, and deodorant packages; as well as insecticides, personal, and household aerosols.

The company has extended its services *beyond* the supply of the valve and aerosol dispenser components, even to the field of custom packaging when necessary. This later service developed because of the many of VCA's customers who looked for help to the general packaging background of the company's technical personnel. In this respect, the company has made extensive use of plastics, particularly in the development of inexpensive units in which the aerosol valve is an integral part of the container. This has even led to development of molds for glass bottles which have become proprietary.

Because VCA closely combines technical services with sales, the first contact between the firm and a prospective customer is aimed at bringing that customer help in the *technical aspects* of creating an aerosol package. Work toward a pilot package begins at the first meeting with a prospect whose product, in the opinion of the TVA technician, shows market potential in aerosol form. This time-saving factor allows VCA to produce a sample package in minimum time.

Where molding is required, VCA builds a single cavity mold and the finished parts are then presented to the customer for comment, design, and functional objections. A second model, based on recommended improvements, is then worked up and thoroughly tested in the company's technical laboratory. Results are incorporated into a quantity of working models which are market tested; and

One key area in the VCA plant is this well-equipped research laboratory, where experimental formulations are perfected and new packages extensively tested.

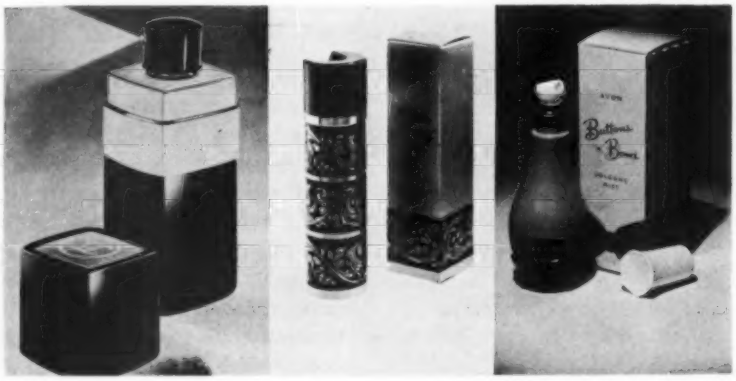
when the results of this expanded test are compiled, a final multiple cavity mold is made and the product is ready for mass production. This procedure, according to George Macura, director of VCA's technical services department, has been successfully employed in the development of many new aerosol products and has succeeded in achieving important money savings for customers. He gives this approach credit for the many referrals of firms going into aerosols for the first time.

One of the company's most recent developments is an all plastic container, made of Dupont's "Delrin," acetal resin which is filled from the *bottom* of the container. Available in a variety of attractive shapes, colors and styles, the package is said to have exceptional strength, impact and corrosion resistance advantages combined with efficient, economical production characteristics. Though the firm has received many patents on valves, containers and actuators, its researchers are continually looking for new ways to make more practical aerosols at lower costs.

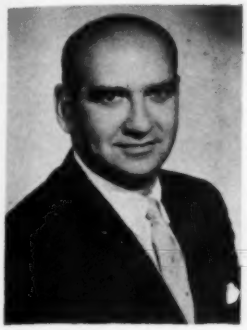
"Today," notes Mr. Sagarin, "increasing competition in an expanding market make it necessary for the aerosol valve manufacturer to *increase* the range of his production and service capabilities. Unless he is ready to take an active part in the development of the whole aerosol package, he will face the real danger of losing out in competition in the aerosol and general packaging industry. Realizing this, we are confident that our background will enable VCA to enjoy a larger share of the market and to continue its current growth pattern."

In the past five years, VCA has expanded its operation into the foreign field and its valves are now manufactured through the Specialty Valves, Ltd., Co., a subsidiary of the

Among the packages on which VCA valves have been particularly successful are Chanel spray cologne, Avon's Buttons and Bows, and Fuller Brush's Golden Accent cologne.



VCA's Key Officers . . .



Philip H. Sagarin
President

F. B. Pickering
Vice-President, Manufacturing

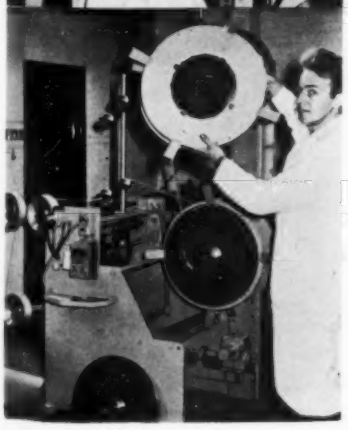
Florence Artell
Treasurer

William O'Donnell
Vice-President, Research

London Aluminium Co., Ltd., whose plant is located in Wolverhampton, England. This company was one of the first in Great Britain to enter the aerosol market. Other licensees are S.A. Reboul, France; and Deutsche Aerosol - Ventil - GMBH, Germany. Companies in Italy, Argentina, and Mexico are now being considered for licenses.

The VCA plant, housed in Bridgeport occupies over 72,000 square feet and employs about 300 people. The officers are: Philip H. Sagarin, president; Frederick B. Pickering, vice-president in charge of manufacturing; William O'Donnell, vice-president in charge of research; Florence Artell, treasurer and assistant secretary and Bernard Glazer, secretary. The board of directors comprises: Philip H. Sagarin, Saul Ritter, David Small, E. G. Ackerman and Joseph F. Flannery. ★

Action's British Affiliate Begins Production



WRAGBY PLASTICS, Ltd., Wragby, Lincoln, England, British affiliate of Colorite Plastics' Action Division (Paterson, N. J.) last month began full production of aerosol dip tubing at about 400,000 feet per day. The company uses a similar extrusion process to that of Action (below) and delivers its tubing in lightweight spools (photos at left). Wragby also has other extruders and molding machines.

These candid photographs by Howard Auerswald of Tubed Chemicals Co. show some of the attendees at the Lucerne Congress. Among the U. S. representatives identifiable are Tom Johnson (DuPont) H. R. Shepherd (Aerosol Techniques) Seth Schneible (Crown) Gordon Gilroy (Precision Valve), and A. O. Samuels.

International Aerosol Congress Reports Industry Boom in Europe

THE aerosol industry in Europe seems poised and ready to take off in a dramatic wave of growth and expansion, paralleling the similar growth which has taken place in the American aerosol industry over the past ten years. This was the definite impression gained at the 3rd International Aerosol Congress of the Federation of European Aerosol Associations held in Lucerne, Switzerland, Oct. 3-8. Approximately 600 participants registered at the Congress, and visitors numbering into the thousands visited the 60 or 70 exhibits which filled three floors of the Congress Hall. The 13 lectures dealing with various aspects of aerosol formulation, packaging, testing, etc. attracted as many as three or four hundred listeners at a time in the meeting room, where facilities were provided for simultaneous translation of all of the papers into French, English and German.

The busiest exhibits were those in which aerosol production equipment was shown. There were several new filling machines shown which attracted a steady stream of visitors, and these exhibitors reported a substantial number of orders placed. Several major propellant manufacturers were represented among the exhibitors, as well as the major European and U. S. valve suppliers, container manufacturers, custom fillers, aromatics suppliers, etc.

General direction of the Congress was in the hands of A. W. Naegeli, secretary of FEA, and A. Wettler, Pluss-Stauffer AG. who served as head of the Exhibition Committee. The Congress was opened by Francois

British Assn. Joins FEA

The British Aerosol Manufacturers Association (B.A.M.A.) is the latest national aerosol association to affiliate with the Federation of European Aerosol Associations. Action by members of BAMA to join F.E.A. was taken earlier this year, and the BAMA application was approved by FEA members at Lucerne.

Wilhelm Staehle
President-Elect

Francois Harlan
President

Harlan of Etablissements de Trevise, Paris, who was completing his term as president of the F.E.A. He is succeeded by Wilhelm Staehle of Interessen-Gemeinsehaft Aerosole, Frankfurt am Main.

Mr. Harlan presented a brief survey on the development of aerosols in Europe which included some rather surprising figures showing how rapidly the industry is currently expanding. He reported that aerosol production in 1959 in the four principal European producing countries of France, Germany, England and Italy totaled 98 million units. Approximately *double the* 1958 *output*. This increased another 50% to 149 million in 1960 and then, in 1961, 35% to bring the total up to 200 million units. Mr. Harlan indicated that an additional 30 million units were probably produced in other countries in western Europe, bringing total European production this year up to 230 million.

Insecticide continues to be the leading aerosol product sold in all countries except Germany and represents between 25 and 50% of the national total for France, England, and Italy. Hair spray and room deodorant, he advised, are the 2nd and 3rd products respectively.

Butane powered aerosols, Mr. Harlan reported, have been more widely developed in France than elsewhere in the European market. He estimated that approximately 30 to 35% of the French aerosol output employs butane as the propellant, while the general average for the balance of Europe is only about 2 to 3%.

There was also an address of welcome by G. M. Mayer of Precision Valve International, Zurich, president of the International Aerosol Association.

It was tentatively decided at Lucerne that two years will elapse

(*Continued on Page* 65)

Package Contest Winner

Durazone (Sales) Ltd., London, winner of the 1960 CSMA Aerosol Package Contest, scored another coup in Lucerne when its "De-Icer" product won the First Prize of the International Aerosol Congress. Durazone also won "Honorable Mentions" for its "Sprayclean" and "Tex" sunspray.

At the Industry Exhibit . . .

. . . propellants and finished products were among the highlights.

(Photo: Seymour of Sycamore Inc.)

The Formulation of Aerosol Paints

*By C. A. Southby**
Chief Chemist
Aerosol Packaging Co. Ltd.
Bracknell, England

WHILE obviously requiring some fundamental technical knowledge, the formulation of aerosol paints and lacquers can be approached by the average formulator without too much apprehension. Outside of the properties which are required from the paints and lacquers as film formers, the main point is correct solvent blend and solvency power, which, after all, is one of the basic principles involved in the majority of aerosol formulations—and therefore is well within the scope of the aerosol chemist.

The advent of the aerosol system has to a great extent overcome the poor brushing characteristics of nitrocellulose lacquers, thereby extending their utility. Although primarily applied to this type of lacquer, the aerosol system has been extended to the spraying of synthetic air-drying enamels and acrylic-based lacquers.

To achieve a satisfactory aerosol paint formulation, certain factors must be borne in mind. The most critical one is the user. For some inexplicable reason the purchaser of an aerosol paint expects *immediately* to be able to produce a good continuous film, with perfect coverage and free of imperfections such as runs and sags. One would not expect to handle a conventional air spray gun for the first time and produce excellent results, but with an aerosol paint, which after all is only a self-contained spray gun, perfect results are expected with the first application.

It is therefore essential to keep in mind that the aerosol paint is to be used mainly by inexperienced spray painters, who expect one application to give a film that is free from runs and sags, has good hiding power and which does not exhibit orange peeling or bubbling.

Many valves designed for use with paints and lacquers have large discharge orifices and button channels so that the clogging effect of the suspended particles of pigment in the paint medium can be minimized. This, however, leads to excessive discharge rates.

The inexperienced user of an aerosol paint will tend to move the spray much too slowly across the surface to be coated. If the valve has a high discharge rate, excessive amounts of paint will be applied and the wet film will run and sag. With this latter point the prime consideration is not in the actual formulation of the paint or lacquer, although this can be of great influence, but on the choice of valve. The ideal valve should spray an area of between 5 and 6 square inches and be of a low enough discharge rate to avoid the application of excessive amounts of paint. A spray rate of just under 1 gram per second will give the right degree of latitude and will compensate for inexperience.

THE conventional use of nitrocellulose lacquers is for the "touch-up" of automobile scratches, minor dents and abrasions. Therefore the aerosol lacquers must have the same properties as the lacquers applied by air spray guns for this purpose. The choice of the major film formers is limited to the types and grades of material which possess the right properties, i.e., build, high gloss, good scratch resistance, hardness, durability and adhesion.

A nitrocellulose finish consists basically of two parts; the volatile and the non-volatile parts. The non-volatile part consists of nitrocellulose, resin, plasticisers, and pigments,

* From an address presented to the third International Aerosol Congress of the Federation of European Aerosol Associations held in Lucerne, Switzerland, Oct. 3-8, 1961.

while the volatile part consists of true solvents and diluents

Because of the relatively low viscosities required for aerosol dispensing, a nitrocellulose of low viscosity but of high solids is required to give a good build, particularly where a scratch has to be filled and covered. Again, because of the use of liquid propellants in the formulation(which are poor solvents for nitrocellulose) a nitrocellulose which is extremely soluble in strong solvents — and one with a high nitrogen content (between 11.8% and 12.2%) soluble in ester and ketone solvents—is required.

It can therefore be seen that the choice is limited. The "dense" solids, of extra low viscosity, and high nitrogen content, are best utilized.

With nearly all nitrocellulose lacquers a modifying resin or alkyd is incorporated with the nitrocellulose. The inclusion of the resin will reduce the hard brittle nature of nitrocellulose and give the film adhesion and gloss, improved durability, and moisture resistance. Various types of resin can be included, dependent upon the desired properties, but the most commonly used are the non-drying oil alkyds with an acid value below 20. Drying oil alkyds, natural and synthetic resins and even epoxidised resins can be used.

Basically the addition of a resin will improve the "build" of the film and also reduce the fairly high cost of straight nitrocellulose. Besides the normal properties required which will affect the choice of resin, the resin must be completely miscible with one or more of the volatile components. This, of course, is most important particularly in view of the diluent properties of the propellants which will reduce the overall solvency power of the volatile constituents.

However, should the desired properties of the lacquer call for the use of natural resins, greater caution must be used by the formulator. Such resins as Kauri, Manila or Congo cannot be used because of high viscosity yields and appreciable gelatinous proportions. As the consistency of an aerosol formulation is of prime importance, the higher viscosity provided by certain types of natural resins mean greater reduction of the total solids of the film and therefore decreased film thickness. Also valve clogging can be expected by gelatinous material being present in the aerosol container through the medium of the natural resin.

In nitrocellulose lacquers it is generally advisable to use a plasticiser to increase the flexibility of the film. Conventional plasticisers such as dibutyl phthalate, sextol phthalate or tricresol phosphate can be used but the most common used is dibutyl phthalate which is superior as it gives films of much higher tensile strength. This is particularly important in aerosol lacquers, as the dried film thickness tends to be lower than that achieved with normal air spray gun equipment.

PIGMENTATION of aerosol lacquers does vary slightly from the pigmentation of normal formulations. Pigment/binder ratios in normal types of cellulose lacquers vary from 0.75 to 1, to 1 to 1. Because of the lower solids in aerosol lacquers it is advisable to increase the pigment-binder ratio slightly, by approximately 10%, to give a lacquer of better hiding power.

Generally pigments which are compatible with the resins should be used, though it is advisable to keep to a minimum the concentration of extenders. These materials, transparent in oils and added to a normal pigment system purely to extend and cheapen, have *no* hiding power. They are somewhat denser than true pigments and tend to cake on settling, particularly in aerosol formulations where a state of low solids and low viscosity exists. Because of this problem of settling and the danger of valve blockage due to a solid plug of pigment being forced up the dip tube and into the valve, the well dispersed pigments should not be used, as on settling they tend to form a hard cake which is not easily re-dispersed. It is advisable, whenever possible, to formulate on flocculated pigments. Although they settle rapidly they are easily re-dispersed.

The problem of settling can be minimized by the addition of anti-settling agents, but with normal lacquers their use is limited, as the gloss will be affected by over-concentrations. Another method is by the inclusion of an agitator. The normal process of stirring to re-disperse settled pigments, as with a can of paint, cannot be carried out, but if an agitator is included in the pack, when the aerosol is shaken the free agitator will help pigment re-dispersion.

The above points as far as pigmentation is concerned apply to all types of aerosol paints and lacquers and not necessarily to nitrocellulose alone.

The most important part of aerosol formulating is in the choice of the blend of solvents. The normal type of nitrocellulose lacquer consists of: *true solvents*, which will solubilize both the nitrocellulose cotton and the resin; *latent solvents*, which as their name implies do not act as true solvents for the active film formers but which help to eliminate a number of defects true solvents will introduce into the formulation—mainly water blush arising from their high evaporation rates; and *diluents*, invariably aliphatic or aromatic hydrocarbons which act purely as extenders and help reduce viscosity. In the aerosol formulations diluents are not required, as the propellants, being aliphatic hydrocarbons, will act in the same capacity.

The very many solvents which are now commercially available give the formulator a very wide field from which to choose the correct solvents for the formulation and it is in this choice that his skill is required. It is necessary of course for the solvents to have the combined effect of keeping in solution both the nitrocellulose and the modifying resin. It is important that the most volatile solvent used in the solvent blend be a good solvent for both the resin and the nitrocellulose. It is a common fault that the most volatile solvent, while possibly being a good solvent for the nitrocellulose, may not be particularly good solvent for the resin and thus will give rise to a defect known as

"resin bloom," a defect which is prevalent in both aerosol and non-aerosol formulations.

Assuming that the formulation in mind is for the purpose of automobile touch-up, the choice of solvent is limited to the type of nitrocellulose and the type of resin required. As previously mentioned, if the type of nitrocellulose is one of the dense forms with low viscosity and high nitrogen content, the best true solvents are either esters or ketones. The most superior true solvents for this purpose are those which contain carbonyl groups. With the homogeneous series of solvents, such as the acetic esters of saturated aliphatic alcohols, the solvent powers decrease with the increase of molecular weight. The same applies to secondary alcohols with the resulting ketones; therefore the use of both esters and ketonic solvents is limited by the solubility of the particular grade of nitrocellulose, and by the solubility power of the modifying resin.

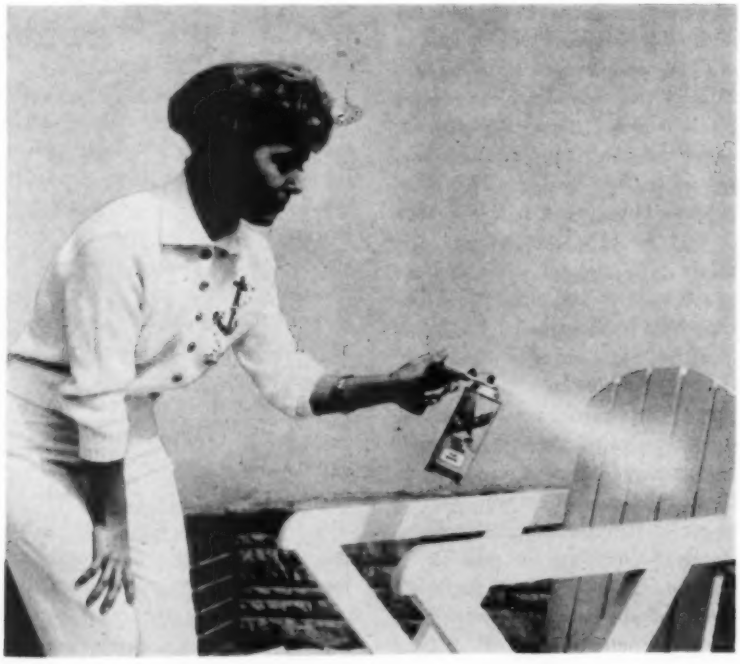
When selecting solvents, it is of particular importance that a study be made of the solubility parameter of the resin. The term "solubility parameter"is the property of a compound which enumerates its solvency power in a semi-quantitative way. This property is related to the heat of vaporization and the molecular film of a pure chemical.

The majority of solvents have solubility parameters between 5 and 15, while resins have solubility parameters between 7 and 9. To allow for the poor solvency power of the propellants, it is always advisable to choose a solvent having a solubility parameter which is on the upper end of the solubility parameter of the resin. This will allow the solubility parameter of the solvents to compensate for the low solvency power of the propellants without precipitation of the resin occurring when the propellants are added to the formulation. Even so it is advisable to have a safety margin built into the formulation to allow for slight errors in filling during commercial production. For this reason it is necessary to include a small amount of solvent with a solubility parameter above that of the film formers.

Really the most important factor in the solvent blends is to achieve the correct rate of evaporation and drying time. On this question of evaporation rate one must always keep in mind that the very high evaporation rate of the propellants will lend a chilling effect on the drying paint film which will tend to *decrease* the evaporation rate of the solvents. Normally solvents with evaporation rates slightly in excess of what is required should be used to compensate for a drop in temperature.

Probably one of the most common faults with aerosol paints is propellant retention which will lead to bubbling due to vaporization of the trapped propellant on the surface of the wet film, thus causing bubbles due to trapped pockets of vaporized propellants. These trapped pockets of propellant will also cause localized low viscosity, which again will lead to sagging as the bubbles burst. Propellant retention is a rather complex problem, but it has been determined that it is due to the surface tension of the resins being higher than the surface tension of the propellants. This can be easily overcome by the inclusion of small amounts of polar solvents, such as isopropanol or butanol, which will decrease the surface tension of the resin.

(Alfco photo)



I SHOULD now like to briefly cover synthetic air-drying and acrylic type formulations. Many of the problems, and particularly the problems of defects, are common to all types of paints. The main difference between nitrocellulose and the synthetic air drying enamels is that nitrocellulose gives a dried film purely by evaporation of the solvent, while the synthetic air drying enamels dry by direct *oxidation* of the oils present in the formulation.

Nowadays the synthetic air-drying enamels are invariably based upon alkyds. The decorative type enamels consist of an alkyd which is a condensate product of a polybasic acid and a polyhydric alcohol being modified by the addition of a vegetable oil in varying proportions. The alkyd is purely the medium in which the pigments are dispersed and when dry gives a durable and high gloss finish. The main problem, so far as aerosols are concerned, is that the solubility of the alkyd in the presence of the

(*Continued on Page* 67)

A New Package For "Glade"

from S. C. Johnson

A NEW air freshener claimed to reach new heights of lightness in scent because of its "naphtha-free" aqueous aerosol system has been introduced by S. C. Johnson & Son, Inc., Madison, Wis., for its "Glade Mist." Claimed to provide the "first major product and packaging change in air fresheners since aerosols took the lead from wicks," the new line of four fragrances has been extensively tested from a standpoint of consumer preference.

William Herzog, product manager for S. C. Johnson, listed these two major developments for the new line:

1. "Glade Mist" has a new naphtha-free formula with a "truly light scent." He reported its aqueous system is unlike conventional aerosol air fresheners which employ hydrocarbon-type bases with their own odors which require substantial masking. By eliminating "all odor-bearing ingredients except the fragrance to be dispensed, the product achieves a lightness and subtlety of scent not previously possible."

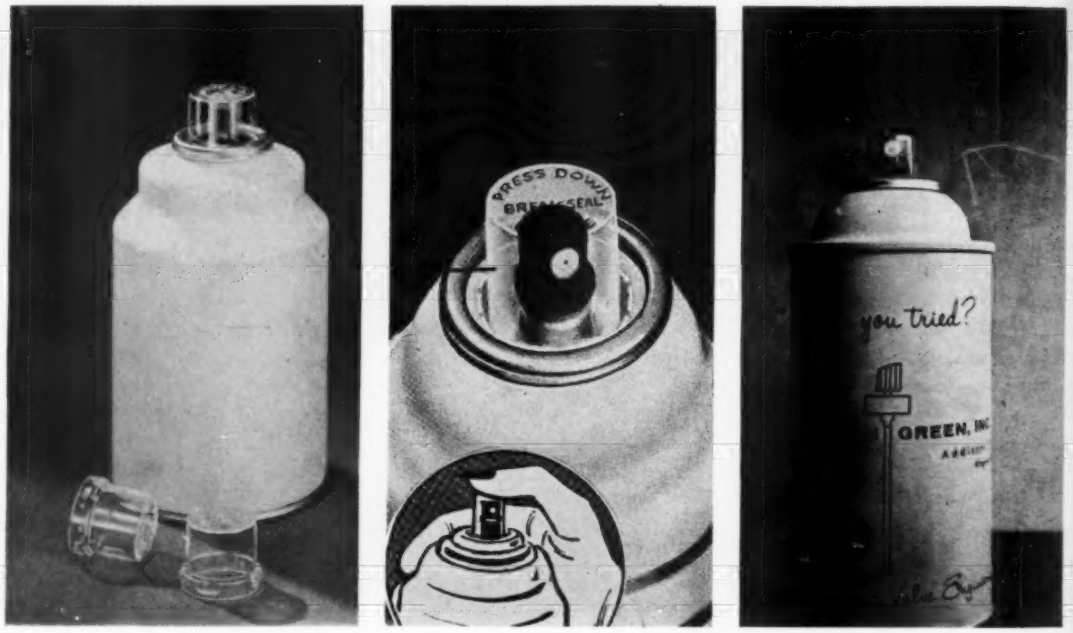
2. Exclusive new package design permits dispensing without cap removal—through use of an "integrated" valve cap. The spray button is flush with the top of the cap, with the top contoured to provide directional control of the spray.

The valve-integrated caps were designed by Valve Corp. of America, Chermayeff & Geismar, and Johnson's design staff. The linear polyethylene caps fit over V. C. A. valves. Cans are supplied by Crown Cork & Seal Co. and paper labels designed by Chermayeff & Geismar and supplied by Western Printing & Lithographing Co.

The four consumer-tested fragrances in the "Glade Mist" line are: Spring Flower, Floral Sachet, Evergreen, and French Modern. All four, said Mr. Herzog, rated better than leading competitors in home-use preference tests. The fragrances trend toward the cologne-type scents which recent research indicates that women like better than food-oriented scents. Another innovation is newly designed labeling, "simple and unobtrusive," that is said to contrast sharply with current label types for most air fresheners. Its simplicity, while maintaining good shelf-visibility, is designed to encourage users to "leave the container out in the open at home, where it will be used more often," he said. The Johnson sales official also announced that the "Glade Mist" line will be priced lower than many brands now on the market and will offer the consumer more product because of a new larger container.

"Pricing, product and packaging advantages will put 'Glade Mist' in an excellent competitive position," Mr. Herzog asserted. The new products

(*Continued on Page* 67)



Three new "break-away" seals, which fit *under* conventional cover caps, are being offered by PharmaPlastics, Inc., Baltimore; Aerosol Research Co., Forest Park, Ill., and Newman-Green, Inc., Addison, Ill.

"Tamper-Proofing" the Aerosol Package

new "breakaway" seals add to possibilities . . .

WITH an obvious eye to increasing its sales in supermarkets and other self-service outlets—and with a special nod toward the stringent demands for product integrity set by the pharmaceutical marketers—the aerosol industry has come a long way in a very few years in the matter of "tamper-proofing" its products.

Since the early days of the industry, there has been an understandable reluctance to "push" sale of certain products in self-service retail outlets. The novelty of the aerosol, coupled with the fact that price-marked overcaps were often interchangeable, appeared to give encouragement to two bothersome consumer malpractices: (1) sampling *before* buying and (2) cap switching to take advantage of the cheaper price.

It is obvious that sampling before buying can be a costly and bothersome practice. In spray products (room deodorants, insecticides, waxes, for instance) probably the most damage to the finished product is a messy-looking actuator. In foam products, because of foam delivery after actuation (caused by vaporization of the propellant residue in the stem) this problem is even more acute, since it is almost certain that some messiness will occur. In neither of these instances, however, will it usually cause inactivation of the whole package.

It is a more serious matter for certain special product categories. Aerosol paints, for instance, represent a relatively high-priced product which may be ruined by *just one* pre-sale actuation. A paint smeared actuator is not only unsightly, but will likely clog completely before any more of the product can be sprayed. And since many aerosol paints are sold to the customer wishing to match a particular color, the desire to test the color before buying can be a strong one.

Pressurized foods can also present a problem. Since most are whipped toppings (and therefore foam formulations), product residue in the valve can create an unsightly and even a highly dangerous situation. The danger stems from bacterial decomposition of the product residue, from simple spoilage (for whipped cream based formulations) to *Botulinum*

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"Tamperproofing" the Aerosol (Continued)

Older tamper-proofing efforts include the cap seal (top left), DuPont "Vexar" netting to seal entire package, Dupli-Color's "Spra-Lok," and the familiar pop-up cap for pressurized toppings' foam valves.

and other serious food poisoning. But the fact that foods are usually kept under refrigeration is one saving factor: refrigerated food cases in most supermarkets are among the most carefully supervised (by store personnel) and are also usually the most heavily shopped areas in the store.

Possible pre-sale sampling of pharmaceutical products has been a major worry of the drug industry from its inception. Despite the oft-repeated convenience attraction of the aerosol package, many of the drug marketers shied away from such easily sampled packages because of the inherent perils of product contamination, desire to conform to stringent Food and Drug Administration rulings on such subjects, and the traditional drug industry desire to guard product integrity.

JUST as important as indiscriminate sampling has been possible cap switching. This is a highly subtle form of pilfering, since if caught at it the shopper can always claim that the product had the cheaper priced cap on it when he picked it up from the shelf. Of course, the larger and more efficient the supermarkets become, the easier it becomes to switch caps and get away with the more expensively-priced item. Check-outs operate faster and with less attention to individual packages (the larger the number of packages, the less familiar the checkers are able to become with each package). Also, as the stores increase in size, all forms of product pilferage become commoner since store personnel observation of the customers become more complicated.

One obvious way to minimize cap-switching is lithographing of the price on the side of the container. This method, employed by the Barbasol Co. and other shave cream marketers, eliminates chance of the cap switching gaining anything more than a new cap. The shaving cream's foam dispensing valve lends itself to fool-proof marking anyway since in many cases there is ample room on the shoulders of the package to do a good price marking job.

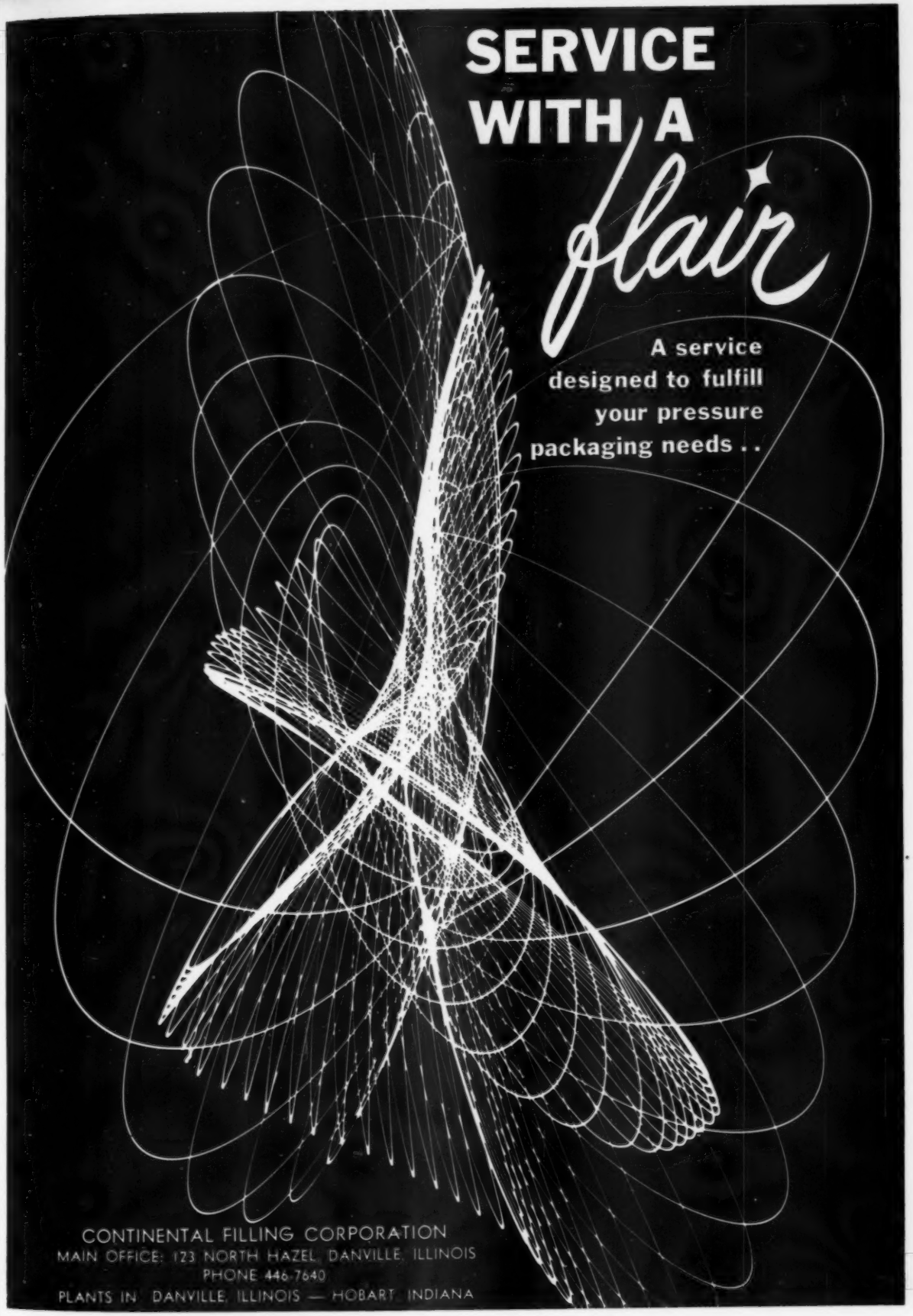
Another defensive method tried with some success has been the adoption of caps which match (either by color or design) with the body of the can. This approach makes switching extremely tricky because it can nearly always be detected by the checker.

THE latest "mechanical" tamper-proofing to be offered the aerosol marketer consists of an inner clear plastic seal which can be applied under the conventional overcap. Almost simultaneously developed by PharmaPlastics, Inc., Baltimore; Aerosol Research Inc., Forest Park, Ill. and Newman-Green, Inc., Addison, Ill. these inner caps, valve seals, or whatever, are basically similar in appearance and mechanical working.

PharmaPlastics, which has applied for a patent on its seal, is offering it in either styrene or polyethylene. Like those of the other makers, the cap fits inside the one-inch mounting cup to prevent any tampering whatsoever. Should the seal be forcibly removed by the shopper intent on tampering, he will be unable to reposition it and the real buyer is alerted by the break. PharmaPlastics' model employs four supports (which are broken when the seal is removed) and the base is anchored by four lips or projections.

Newman-Green began development of its tamper-proof seal in 1959, and

(*Continued on Page* 65)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A small-scale aerosol filling laboratory is used in the insecticide laboratories to create new formulations.

New Insecticide Laboratory is Unveiled by FMC's Niagara Chemical

A NEW pesticide unit designed to accelerate chemical synthesis of new insecticides and residue analysis of existing ones has been opened at Middleport, N. Y., by the Niagara Chemical Division of FMC Corp. (formerly Food Machinery & Chemical Corp.). Stuart Bear, manager of the division, reported at a special press conference that the new facilities will be devoted to an intensive search for new and improved pest control materials for home, agriculture, and industry.

The new unit consists of 18,500 square feet of laboratory and greenhouse space. It represents stage one of a two-part expansion program which calls for an addition to the building (within the next three years) which will double laboratory and quadruple greenhouse space and will include administrative office and library facilities. An average of 2,000 compounds per year will be screened for biological activity in the new research quarters.

Eleven laboratories are housed in the facility, including two devoted to organic synthesis, one to formulation, three to chemical analysis, and five to entomology. Two of the latter will be occupied by personnel engaged in research on household and industrial insecticides. And one section of the formulations laboratory has been equipped with a laboratory filling unit for research on aerosol formulations using new and improved insecticides.

One feature of the new facilities is that the household insecticide laboratories are windowless in order to provide a standard intensity of illumination of the Peet Grady chambers used in testing fly control materials.

Some 30 to 35 people, represent-

(*Continued on Page* 65)

Two scenes in the insecticide laboratories. At left: applying sugar and water solution to fly cages in order to sustain test flies and prevent their death from natural causes. They are being observed for the effects of previously sprayed insecticides. At right the effect of insecticides on various plants is being observed.

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Puritan Aerosol Corp. Begins Compressed Gas Filling For Non-Food Aerosol Products

A NEW series of formulations has been developed by the Customer Service Laboratories of Air Reduction Sales Co., Madison, Wis., to permit the extensive use of carbon dioxide and nitrous oxide in non-food products. This development is expected to give an even greater impetus to future development of the aerosol industry's sales, which have been authoritatively esitmated as likely to double the 1960 figure of 700 million units within the next seven years.

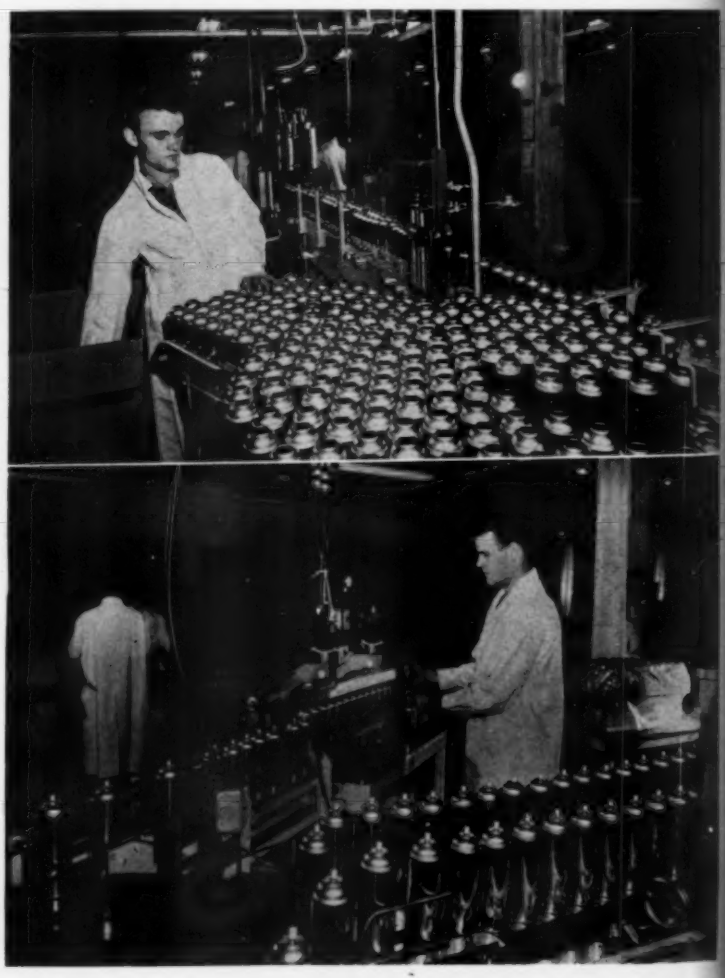
Spearheading the use of these compressed gases among the custom fillers is Puritan Aerosol Corp., pioneer Boston custom filler and loader. Presently using bulk quantities of carbon dioxide supplied by the Pure Carbonic Co., this company is at the same time actively experimenting with a wide range of new products using nitrous oxide, which it will obtain in similar quantities from Ohio Chemical & Surgical Equipment Co. Both are divisions of Air Reduction Co.

Puritan will use the two compressed gas propellants to help it cut propellant costs and increase the active ingredients packaged in each aerosol can. It is no secret that the cost of the fluorinated propellant has figured importantly in the customer price of the aerosol (it can range as high as 18 cents for a 16-ounce can). For a compressed gas propellant, this figure is less than 10% of the cost of the more expensive propellant, and costs generally range under one-half-cent per can. Another advantage claimed for the compressed gas propellant is that it occupies less space in the can because it is completely or partially soluble in the product.

Although presently limited to those products *presently* dispensed as wet sprays (surface insecticides and furniture polishes) Puritan's research staff is currently completing work on refinements that will permit far wider applications. In fact, Harvey White, president of Puritan, suggests that the application of these new formulations may be practical in a minimum of one-fourth of his company's extensive product line. And he is apparently willing to extend this estimate to overall industry totals.

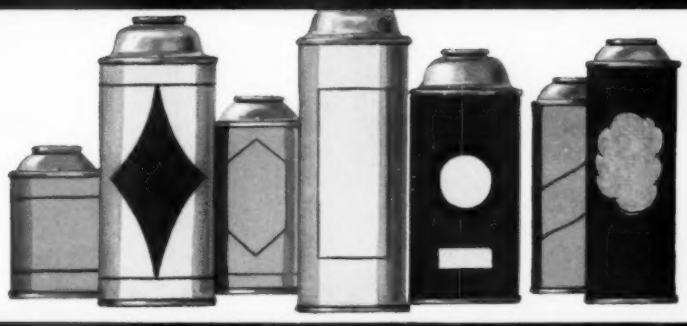
Acquired by new management just two years ago, Puritan has already succeeded in tripling its volume and doubling its customers. In 1961, sales figures are reported to be 60% ahead of last year's—a growth attributed to the company's research and development capabilities, its modern aerosol filling equipment, and to close attention to customer service.

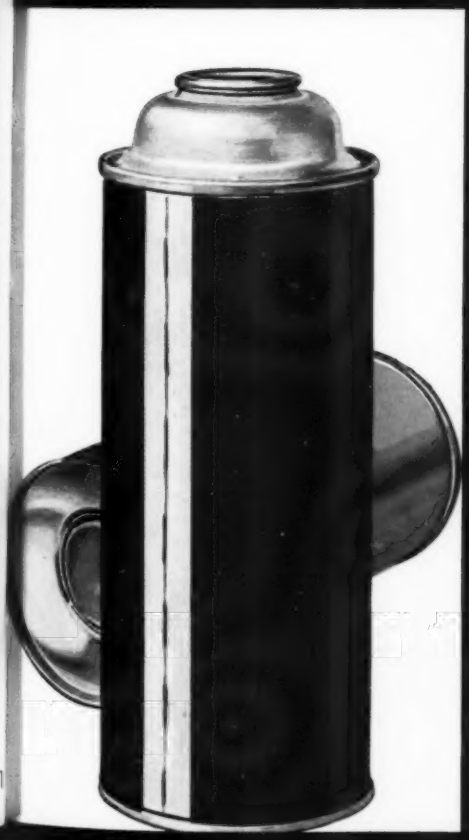
To meet the present, and anticipated) upsurge in business, Puritan is currently building a new $1-million plant in Brockton, Mass. Due for completion in about four months, its 55,000 square feet will house five new production lines, expanded research and development laboratories and warehousing.★



New Puritan line shows (top) unloading of empty cans onto line and (bottom) pressure checking of filled cans after charging operation.

NO MATTER HOW YOU LOOK AT IT CONTINENTAL HAS THE RIGHT AEROSOL CAN FOR YOU





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THE SAMPLE SHELF

By Jerome N. Michell
vice president
The Walter Frank Organization
Hillside, Ill.

THE AEROSOL overcap is certainly a major appearance factor of any aerosol product, and it contributes in no small manner to the general consumer impression and packaging image. With metal containers virtually imprisoned within a round shape in the vast majority of aerosols, the label and the overcap must make up the entire design difference. Glass, aluminum, plastic, and the decorative outer cases are exceptions, but these comprise a relatively small percentage of the total aerosol products.

Of course, there is a wide price difference between a one-inch metal or plastic cap and the oversize full diameter overcaps, and each marketer must satisfy himself as to the worth of a more expensive cover. There are very large volume product marketers who seek to keep costs at an absolute minimum, and who depend upon advertising and merchandising know-how to obtain the ultimate in sales. There are equally large sellers (also among the big advertisers) who feel that they must develop a size impression and offer a more distinctive appearance than is obtainable with the less costly overcaps.

Strangely, there has been *no* design revolution in the overcap phase of aerosol packaging components. Small and large metal overcaps have dominated the field since its inception because of cost, strength, and lithographic possibilities. The shapes of these metal overcaps are obviously somewhat limited due to metal forming characteristics.

Plastic overcaps have a wider range of shapes to tool up for—but have never progressed beyond what is available in metal cap shapes (though there have been a few distinctive flared caps). One notable exception to this has been several striking cap designs developed by Avon. The smaller diameter brass, aluminum, and plastic caps similarly are old hat from an appearance standpoint.

There *are* a few innovations for directional spray and a few overcaps are permanently locked on the mounting cup to overcome the necessity of removal every time the product is used. These have advantages in convenience but disadvantages in prevention of operation before purchase.

Pictured here this month is pretty much the gamut of aerosol overcaps, from a new one just reaching the market for Johnson Wax's "Glade" to the old standards.

In surveying the field and talking to many of the big users, the primary reason given for the lack of imagination and design in overcaps is cost. To keep an aerosol under a dollar at the retail level is a feat in itself—cost-to-selling ratios considered—and it even seems to be a cost fight for many of the items selling up to $1.50 and $1.75. So to hold the line, the overcap (among other things) must be bought for less and less and less.

We wonder if, in the long run, this approach is in all instances the correct one. Surely the larger toiletries, cosmetic and proprietary marketers, ever seeking a superior image, should be willing to invest in a design project or program that would put their products "ahead" of competition. Surely a radical change in the overcap would create a new look for any aerosol. Equally sure is the fact that this new look must come from either the label or overcap, because the can companies seem a long way from stirring themselves to make anything beyond the round aerosol can.

Metal overcaps can be different.

Plastic overcaps can be different.

Combinations of metal and plastic overcaps are certainly possible and can be different.

Overcaps for foam products need not be as unimaginative as they now are.

Let one marketer break the barrier in overcap design by initiating and developing the project himself, instead of waiting to see what a cap company will bring him, and the gates will swing wide open as everyone seeks and all will be forced to follow. ★

Barrett Speaks at Packaging Forum

A SEMINAR on "Planning, Installing, and Operating a Pressure Packaging Line" was one of the highlights of Packaging Institute's 23rd annual National Packaging Forum in New York last month. The forum was held Oct. 18-20 at the Hotel Biltmore.

J. P. Barrett, senior industrial engineer in packaging at S. C. Johnson & Son, Inc., Madison, Wis., first delivered a detailed technical paper describing how his company perfected its own aerosol filling line. Afterwards, Byron Kingery, Lederle Laboratories; Norman Yaeger, Colgate-Palmolive Co., and F. W. Politi, Rexall Drug Co. questioned Mr. Barrett about the various equipment

(*Continued on Page* 62)

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POWER PROPELLANTS

Schwinn Approved cleaner-polisher for bicycles and similar finishes is a new product of Sprayon Products, Inc., Cleveland. The first bike polish in aerosol form, it is packaged in 6-ounce containers for sale in bicycle shops and Schwinn dealers. Sprayon also packages a complete line of touch-up paints marketed in the same outlets.

DeMert & Dougherty, Inc., Chicago, has introduced this aerosol spray kit for use with deodorants, paints, inks, insecticides, or weed killers. Complete unit, with Crown "Spra-tainer" of aerosol propellant, will retail for $2.49.

Stanley Home Products, Westfield, Mass. has introduced its **Lady Catherine Hair Spray** in a one-ounce "Peerasol" aluminum container by Peerless Tube Co. Package uses a VCA mechanical break-up valve.

NEW PRODUCTS AND PACKAGES

Chemplast, Inc., East Newark, N. J. has brought out its **Fluor-Glide** lubricant and anti-stick agent in a larger (16 oz.) package to meet large quantity applications of industrial users. Product is a combination of fluorocarbon polymer and adhesion promoter capable of withstanding a wide range of temperature variations.

news of pressurized packaging

Cooper Tries to Hold Prices

Cooper, McDougall & Robertson, Ltd., Berkhampstead, Herts, England, a leading British aerosol marketer, last month went on record with an attempt to hold the price line in Britain. Over the past two years the British aerosol market has been beset by a hot price war which has reduced the consumer price on many aerosol products to about two-thirds of former prices.

C. D. Lawson, manager of the company's household sales, said at a meeting in September that Cooper has established a policy decision to enforce retail price maintenance of their products by printing new conditions of sale *on all invoices*. He said this did not mean the company was advocating a policy of high prices. "On the contrary, we have led the field in passing on to the consumer any advantages obtained from greater production efficiency. In the last five years, we have made three price reductions on our products—and this during a period of rising prices."

Mr. Lawson further went on to say that the step was taken "after a great deal of discussion on all aspects of the problem. We know the snags, but it is our intention to protect the trade profits on our products. Trade support for our present policy has come from the most unlikely quarters, which leads me to believe that we are right in thinking that the trade as a whole will welcome the move."

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D&D Elevates Malpede

Joseph Malpede has been appointed vice president in charge of cost control and administration for DeMert & Dougherty, Inc., Chicago, aerosol filler. He will supervise cost control and administration for all DeMert & Dougherty divisions and plants located in Chicago, St. Louis, Kansas City and Kearny, N. J. Mr. Malpede, a certified public accountant, has been with DeMert & Dougherty for three years as comptroller and will retain this position in addition to his new duties.

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Tomlinson to Allied Post

Joseph J. Tomlinson has been named assistant advertising director of Allied Chemical Corporation, according to Michael P. Ryan, director.

Mr. Tomlinson, who has been advertising manager for the company's General Chemical Division since 1944, will share increased group responsibilities of the company's central advertising department with Robert K. White, another assistant director.

Since an important area of Mr. Tomlinson's new function will be the promotion of "Genetron" aerosol propellants, he will continue his active participation in aerosol industry affairs as a member of the board of governors of the Chemical Specialties Manufacturers Association and as vice chairman and program chairman of its Aerosol Division.

A one-time reporter for the *Cleveland Plain Dealer-Cleveland News*, he served during World War II as supervisor of publications and public relations for General Chemical Defense Corp., which General Chemical operated for the government. Earlier business experience included posts as assistant advertising manager and editor, Ohio Public Service Co., and publicity chief for the Cleveland Community Fund. He also was associate editor of the *Cleveland Heights Press*. He is an alumnus of Western Reserve University and took special advertising and marketing training at several other colleges and technical schools, including John Carroll University, Fenn College and John Huntington Polytech.

In addition to CSMA activities, he is also a member of the National Industrial Advertising Association, and a member of the public relations committee of the National Agricultural Chemicals Association.

•

Shulton Buys Aerosol Marketer

Aerosol Corp. of America, Wellesley Hills, Mass., has been purchased by Shulton, Inc., Clifton, N. J., cosmetics and toiletries marketer, for 30,769 shares of Shulton stock. Aerosol Corp. will continue to operate without change of management, with James R. Barnet, president, continuing to direct the company's affairs.

Aerosol Corp. of America was the first aerosol marketer to bring out a pressurized starch product with a high-expenditure television advertising campaign. The company also markets an extensive line of insecticides, room deodorants, etc., in supermarkets and hardware stores. Shulton, which is active in the chemical and pharmaceutical field, is the marketer of "Old Spice" toiletries and the "Bridgeport" line of insecticides and room deodorants.

An invitation to opportunity in the aerosol field

JOIN THE CSMA

The Chemical Specialties Manufacturers Association is an active organization of people and companies with the same business interests and objectives as you. It is dedicated to producing better products, expanded markets and improved selling methods for aerosols in all fields including:

- **Cosmetics**
- **Pharmaceuticals**
- **Foods**
- **Insecticides**
- **Paint**
- **Room Deodorants**
- **Other household pressurized products and related chemical specialties**

As a member, you can help further these objectives because it's a hard working organization — and reap even greater benefits from the combined efforts of total CSMA membership.

Scientific Research. The CSMA actually establishes laboratory methods for testing.

Legislative Help. Of utmost importance today, the CSMA alerts its members to pending legislation that may affect them. They also work closely with the Federal and State governments on standard specifications . . . labeling . . . and the development of model bills.

Market Help. The CSMA keeps its members abreast of the markets and its trends through an annual survey of production in each of its six divisions.

Why not join forces with those whose objectives parallel your own? For more information about the CSMA and how you can join, write: Chemical Specialties Manufacturers Association, 50 East 41st Street, New York 17, N. Y.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, INC.

AEROSOL DIVISION

Precision Valve, Airkem End Licensing Agreement

both companies plan expansion of operations in Europe

THE agreement under which Airkem, Inc., New York, has served as exclusive licensee for the Precision valve outside the United States and Canada, will be terminated at the end of 1961 when the present licensing arrangement expires between Airkem and the owners of the patent for the Precision valve, Robert Abplanalp, John Baessler and Precision Valve Corp., Yonkers, N. Y. *Aerosol Age* was advised of this decision at last month's Aerosol Congress in Lucerne, Switzerland by Robert Abplanalp, executive vice-president of Precision Valve Corp., and John Monkman, board chairman of Airkem.

European patent rights to the Precision valve were until recently jointly owned by Mr. Abplanalp, Mr. Baessler and Fred Lodes of Lodes Aerosol Consultants. When Mr. Lodes sold his equity in Precision Valve Corp. five years ago, he continued to retain his one-third interest in the foreign patents. This interest was recently acquired by Precision Valve Corp.

Under the previous arrangement, Airkem had exclusive rights to grant licenses under the Precision Valve patents outside the United States and Canada, and had named licensees in ten countries, including their own company, Prazisionventil GmbH in Frankfurt, Germany.

Precision Valve Corp. has announced that it will in the future manufacture its own valves for the German market at a plant now completed in Hattersheim am Main, Germany. A new company, Deutsche Precision Valve GmbH, a wholly owned subsidiary of Precision Valve Corp., has been set up to handle manufacture and sale. Alexander Leykam is general manager of the new company, Dr. Herbert Meuresch is director of research and development and Hilmar Schneider is sales manager. Both Mr. Schneider and Dr. Meuresch were formerly with Airkem's European subsidiaries—Mr. Schneider with Prazisionventil in Frankfurt, and Dr. Meuresch with Chemtech AG, Zurich, where he was in charge of the Precision research laboratories.

In other European countries outside Germany, Precision Valve will retain previous licensees. These include Metal Box Co., London, which will continue to be the English licensee, Societe Elekal, the French licensee, located in Paris, and Bombrini Parodi-Delfino in Rome, Italy.

In commenting on the changed relationship, Mr. Abplanalp emphasized that Precision's basic valve patent and its numerous patents on components have not expired. They are still in effect and the company intends to maintain its patent position.

Mr. Monkman stated Airkem will remain in the valve business in Europe, utilizing their existing organizations in Germany and Switzerland. Beginning in January, 1962, these organizations will market the Perfect valve made for them initially in Germany by Ventilgesellschaft GmbH, an affiliate of Spritztechnik GmbH, Valbert/Westf. Spritztechnik has manufactured aerosol valves in Germany for Prazisionventil GmbH.

The European companies owned by Airkem will continue operations in the European market, but with names changed to Perfect Valve International in Zurich and Perfectventil in Frankfurt, Germany. Gerald Mayer, president of the International Aerosol Association, will head Perfect Valve International and Dr. Werner Hoffmann will be in charge of the associate company in Frankfurt. Both men had similar responsibilities with the predecessor companies, Precision Valve International, Zurich, and Prazisionventil, Frankfurt. William Delmore continues as vice-president of Perfect Valve International and from headquarters in Zurich will act as assistant to Mr. Monkman on all aerosol valve matters affecting Airkem around the world.

Mr. Monkman also stated that Airkem is further expanding its aerosol valve interests. The company has purchased the U. S. patents for the Safca valve and expects to introduce this unit to the United States market early in 1962. The Safca valve originated in France and is now manufactured in both France and Italy. It was reported in *Aerosol Age* (January 1961) that the Metal Box Co. of Great Britain would also manufacture both the Safca valve and Safca neck containers.★

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CSMA Names PR Man

The appointment of George W. Worthington as a publicity writer was announced last month by the Chemical Specialties Manufacturers Association, New York. In his new position, he will be responsible for carrying out the public information and publicity aspects of the association's public relations program.

Prior to joining CSMA, Mr. Worthington was an industrial publicity writer for O. S. Tyson and Co., New York advertising agency. Before that, he was an assistant account executive with Industrial Marketing Services Co., New Jersey, and was New York news editor for an industrial trade publication.

A native of Philadelphia, Mr. Worthington studied at Columbia and Maryland Universities. He served for three years in the U.S. Marine Corps. He lives with his wife and son at 180 Pearsall Drive, Mount Vernon, New York.

"Rise" Commercial Cited by Federal Trade Commission

AEROSOL shaving cream commercials, hard hit by the Federal Trade Commission over the past two years, received another well-publicized pasting early in October. This time a television commercial for "Rise", the leading brand of aerosol shave cream, was cited by an FTC hearing examiner for use of a "phony substance" that was used to represent the product of other shaving cream marketers.

Although similar in general content to previous FTC complaints against shave cream marketers (as for instance, Mennen's "underwater commercial"), the latest FTC action was regarded with considerable apprehension by Madison Avenue advertising agencies. The examiner's order banned Carter Products, Inc., marketer of "Rise", and its agency, Sullivan, Stauffer, Colwell & Bayles, Inc. from making 'falsely disparaging" comparisons involving shaving cream or *any other products*. In effect, this could mean that the action is extended to Carter's advertising for its many pharmaceutical products, and at the same time forbids the agency from running similar advertisements for its other clients.

The New York Times (for Oct. 5) suggests that the ruling potentially could place Sullivan, Stauffer, Colwell & Bayles at a competitive disadvantage, since "the agency could be subject to summary enforcement action by the FTC if the commission judged that any of its commercials violated its blanket prohibition." The newspaper quotes "the chairman of one of the top ten advertising agencies" with the following analysis: "The problem here lies in conflicting definitions of 'falsely disparaging comparisons'. It could be argued that *all* comparisons with other products are disparaging in that they are designed to show that your product is superior to the rival one. Thus, the FTC may now be prepared not only to bar specific commercials or ads which use comparisons, but also to ban an agency from placing such commercials for any of its clients."

FTC Hearing Examiner John B. Poindexter ruled that a "phony substance" containing 90% water was used for purposes of comparison. This competing product dried out in front of the cameras while "Rise" stayed creamy and moist.

Although the commercial was voluntarily dropped several months ago, Carter Products and Sullivan, Stauffer, Colwell & Bayles both announced plans to appeal the decision before the full commission. Originally the agency's chairman S. Heagan Bayles was also named in the complaint, but his name was later dropped by the hearing examiner.

The Federal Trade Commission is currently operating under some far-reaching rule changes, adopted July 21, which are designed to stop delaying tactics by respondents. These rules specify that all negotiations looking to settlement of a case by a consent order be conducted prior to issuance of the FTC complaint. These negotiations are under the FTC's new Office of Consent Orders, a new four-man office which replaces hearing examiners.

A company notified of an alleged violation by the FTC has ten days to file an answer indicating whether or not it intends to comply with a consent order. If the reply is negative (or no reply is forthcoming) then a complaint is issued by the FTC and the litigation will start. Once a complaint is served, a company is denied the opportunity of settling for a consent order.

In addition to sharply curtailing delays by respondents, the new rules are designed to speed prosecutions by the Commission's staff (and hence insure quicker withdrawal of the deceptive advertising) and bring less public attention to the company signing consent orders. ★

Loring Joins Durazone Co.

Durazone-Choice Ltd., British aerosol marketer has announced the appointment of W. Loring, previously with O-Cedar, as aerosol development chemist. He will be working on the further development of the Durazone-Choice range of aerosols and on the introduction of a number of new products.

Mr. Loring will also be responsible for the formation of a research laboratory equipped to deal with the aerosol problems of outside companies. Durazone-Choice have already put into operation its scheme for offering specialized aerosol contract filling facilities to certain industries, and Mr. Loring's appointment is expected to make possible the expansion of these activities by providing an advanced technical research service in aerosol development.

•

Gilbert Expands Sales Coverage

Gilbert Plastics, Inc., Kenilworth, N. J. fabricator of plastic aerosol cover caps, has just announced establishment of a Chicago sales office to cover sales through the Midwest. Located at 6140 No. Lincoln, Chicago (Telephone Number IRving 8-2920), the new office will be headed by Donald J. Murphy, who has hitherto represented the Gilbert aerosol cap line throughout the country.

Ed Newman, who had been Mr. Murphy's assistant, will now cover the Eastern area for Gilbert Plastics.

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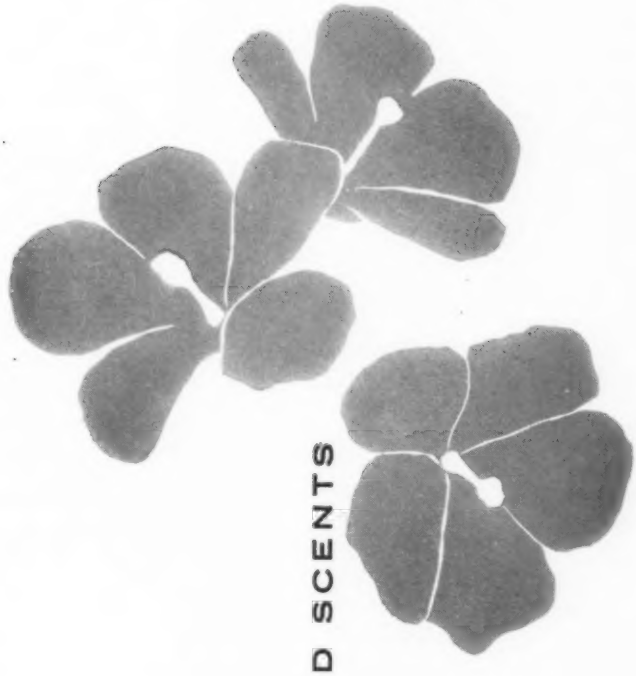
Reefer-Galler Names Endler

Albert H. Endler has been appointed to the newly-created position of vice president and general manager of Reefer-Galler, a subsidiary of Colgate-Palmolive Co., New York. He was formerly manager of Kay Daumit sales with Colgate's Toilet Articles Division.

•

Begin Argentine Can Making

Extrusion S.A., 836 Av. Belgrano, Buenos Aires, Argentina, last summer began full production of monobloc aluminum aerosol cans in 2, 3, 4, 6, and 12-ounce sizes. This is reported to be the first such aerosol can to be made in Argentina, and the company estimates that its total capacity will cover the Argentine aerosol market for the next five years. The company also makes aluminum collapsible tubes and other containers.



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AMA Attacks Use of Drugs in Cosmetic Formulations

THE Committee of Cosmetics of the American Medical Association early last month came out in strong opposition to the use of drugs in cosmetics, and also opposed the use of antibiotics in deodorants. In a report in the *Journal of the American Medical Association* (Oct. 7), the committee declared that "Nobody has ever proved that any kind of drug—such as vitamins, hormones, or antibiotics — when incorporated into cosmetics, has any cosmetological effect in the sense it improves the appearance of nondiseased skin."

Coupled with a booklet, published a week previously by the Food and Drug Administration, the AMA report produced an almost immediate reaction in the stock market. Stock of Revlon, Lehn & Fink, and Max Factor, all of which have been readying new cosmetics of the type described for the consumer market, fell the next day from $1 to $4.50.

The FDA's booklet warned cosmetic users against products having "mysterious miracle ingredients making far-fetched promises that appeal to natural desires to be young and attractive."

This was relatively mild compared to the specifics mentioned in the AMA report, which was authored by the chairman of the association's Committee on Cosmetics, Dr. Stephen Rothman of Chicago.

"No drug," Dr. Rothman declared, "so far has been shown to have no percutaneous absorption at all, although admittedly some have very little. There is no drug which sooner or later would not cause any harm if given without any restriction of the dosage. If it cannot be given without limitation, it is not a drug.

"It cannot be denied that in the case of cosmetics, which are applied only once or several times daily and often on relatively large surfaces, the amount absorbed and permitted to have systemic effects is entirely uncontrolled." From this he concluded that it is "ill-advised to add chemically and pharmacologically active drugs to cosmetic preparations and to sell them across the counter indiscriminately."

Dr. Rothman said he was particularly opposed to use of such antibiotics as bacitracin, polymyxin B, neomycin sulfate, and tyrothricin in cosmetics, pointing out that the toxicity of these materials, coupled with the fact that skin absorption of these antibiotics is relatively unstudied, makes their use highly questionable. He also questioned the threat to public health posed by the development of bacteria resistant to antibiotics used in cosmetics.

"From what we know about acquisition of antibiotic resistance by bacteria, it can be predicted that with the increasing usage of these antibiotics the bacteria in the environment of these people who use antibiotics extensively will become resistant to the particular antibiotic rather soon. If a person applies an antibiotic cream to his or her face more or less continually this skin surface will be sterile. Sterilization of the skin surface is not only not beneficial but could be quite harmful."

•

Corrugated Box Prices May Rise

The price of corrugated boxes may be raised again early in 1962, Lloyd Merwin, president of the Fibre Box Association and a vice president of the Crown Zellerbach Corp., said last month in New York. Mr. Merwin said that "unusually high" demand for the containers, coupled with rises in costs, might account for the increase. The price of corrugated boxes, which are used to ship filled aerosol containers, rose 8 to 10% earlier this year.

•

Shulton Appoints Knowland

The appointment of Daniel P. Knowland, Jr., as director of finance has been announced by Shulton, Inc., Clifton, N. J. Prior to joining Shulton, he was general manager of Harman-Kardon, Inc., and before that was vice president and assistant general manager of Heath Co., a subsidiary of Daystrom, Inc.

•

ConCan Links Up Plants

A 10,000 mile teletypewriter network, linking Continental Can Company's sales offices and plants throughout the United States and Canada, has become operational. The system —known as 83-B-2—is said to be the largest of its kind in the packaging industry.

The network consists of 14 circuits, 101 outlying stations, and three relay stations—in New York, Chicago and San Francisco. American Telephone and Telegraph's long lines department furnished the complete installation which can be expanded or modified to keep pace with business needs.

Capable of transmitting over 500,000 words per day, the network will be used for sales orders, shipping instructions and inquiries, processing of orders, transmission of administrative messages and reports, daily production reports and sales data.

•

Buc Addresses N. E. SCC

The New England Chapter of the Society of Cosmetic Chemists held its first meeting of the Fall season on Thursday, Sept. 28, at Armand's Restaurant, Framingham, Mass. Dr. George L. Buc, assistant to the president of the Fisher Scientific Co., spoke on "Instrumentation in the Cosmetic Industry."

Dr. Buc, a pioneer in the field of instrumentation, covered the following fields of instrumentation: visual, ultra-violet, and infra-red spectrophotometry, gas chromatography, fluorescence, mass-spectroscopy and nuclear magnetic resonance. He discussed instrumentation from the viewpoint of how it can be used and what can be accomplished with it, rather than from a strictly technical point of view. He predicted that paper chromatography would be speeded up by a factor of 25 and infra-red by a factor of 100 over the next 20 years. Fluorescence will have many of its problems solved and prove to be an extremely valuable tool for the analyst.

van Ameringen Speaks to Japanese Cosmetic Group

A. L. van Ameringen (second from right in photo), board chairman of International Flavors & Fragrances, Inc., meeting with industry leaders in Japan at a reception given in his honor recently at the Imperial Hotel in Tokyo. During his four-week visit to Japan, Mr. van Ameringen met with various trade groups and by special invitation spoke on "Fragrances in the Mass Market" before two joint meetings of the Japan Cosmetic Chemists Association and the Japan Perfumery & Flavoring Association held in Tokyo and in Osaka. Others in the photo, from left to right: Herbert C. Buchanan, IFF export manager, Far East Division; M. Taketsuru, president, Nikka Co., Ltd.; Rene Bickart, president, Oppenheimer & Cie., Ltd.

Oppenheim Heads Marcy

Parfums Marcy, New York distributor of "Replique" and "Plaisir" perfumes and other products of Raphael, Paris, last month elected Charles J. Oppenheim III president. He was previously executive vice president.

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Anderson Joins Peerless Tube

Harold D. Anderson has been appointed sales coordinator in the Sales Department of Peerless Tube Co., Bloomfield, N. J., fabricator of aluminum aerosol containers. His responsibility encompasses the coordination of sales activities with the company's engineering, research and production departments. He has spent the last five years in an executive post with Standard Brands, New York.

T. W. Schmitt, Peerless executive vice president, said the new post of sales coordinator had been created at Peerless as another step toward improved customer service and production control. The company recently installed the latest IBM equipment, so it could receive daily reports on the current sales levels. It has also been increasing its production automation and marketing programs as well as product lines.

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Aerosols at Garden Show

Highlighting the new aerosol products exhibited at the Eastern Lawn Garden and Allied Products Trade Show was "Tomatotone" by Amchem Products, Inc., Ambler, Pa., and "Stop-Wilt" and "Twinkle-Tone" by the Doggett-Pfeil Co., Springfield, N. J. The show was held at the New York Coliseum Oct. 20-22.

The 16-ounce hormone spray, "Tomatotone," will ripen tomatoes up to three weeks earlier, bring out a finer color and flavor, and reduce the flower drop by setting the fruit chemically. List price is $1.75. Amchem also displayed an aerosol poison ivy killer, a grass killer, and a Gibberellic growth stimulant.

Doggett-Pfeil's new product "Stop-Wilt" is a garden preservative for tree and shrub protection from winter damage, retailing at $1.79. "Twinkle-Tone," also a preservative, is mainly for beautifying Christmas trees and cut greens. This product is said to create a glossier evergreen and reduces the indoor fire hazard.

•

American Home Prod. Moves

American Home Products Corp. last month completed transfer of its headquarters operations to 685 Third Ave., New York City 17. In September the move began with transferral of the offices of Ayerst Laboratories and Home Products International, and last month Whitehall Laboratories, Boyle-Midway and AHP executive offices followed suit. Phone number of the new headquarters is YUkon 6-1000.

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equipment processes bulletins

Stabilized Methylene Chloride

Dow Chemical Co., Midland, Mich., late last month announced development of a stabilized methylene chloride said to be especially suited to aerosol paint formulations. Called "Methylene Chloride-S," it is being offered for customer evaluation at the same price as technical grade methylene chloride, $0.1125-$0.1250 lb., in tank car to truckload drum quantities.

Dow said the new solvent has the same strong solvating effect on resins, and the same non-flammability, low toxicity, and general property behavior as does the technical product. According to R. A. Lindsay, manager of the company's Technical Service and Development Department, "Methlyene Chrloride-S has special utility in pressurized paints because the specially designed inhibitor system reduces attack on aluminum, reduces catalytic reactions triggered by iron, and gives superior stability in solvent blends with toluene and a range of aromatic solvents." He suggested that higher solids paint systems with consequent greater area coverage are possible with the new solvent.

Dow said the solvent also exhibits "excellent vapor depressant effects, improved resin solubility, package stability, and shelf life for paint systems containing aluminum pigments or those packaged in aluminum cans." The resin solubility, it was suggested, might make possible the formulation of improved paints with the newer, relatively insoluble resins being marketed.

•

New Chishom-Ryder Booklet

Chisholm-Ryder Co. of Pennsylvania, Hanover, Pa. manufacturer of container handling equipment, has just issued a new illustrated catalog showing its complete line of equipment. Included among those units offered for the aerosol industry are the company's "New Way" labelers, casers, case sealers, case printers, bottle inverter and cleaner, and liquid filling machines. For each unit such information as motor size, equipment speed and adjustability, net weight, and shipping weight are given.

Crimp Testing Gauge

A newly designed gauge expressly for checking the distance from the center of crimp to top rim of aerosol cans has been developed by H. C. Kroplin GMbH Messzougfabrik, 16 Schluchtern/Hessen, West Germany. Called the "S 1538," the gauge has a range from .060 to .260 inches. For U.S. marketers and fillers, the company is offering air mail delivery.

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British Adopt Filling Technique

A special nozzle for propellant injection through the valves with the actuator button in place has been developed for the British market by Aerofill Ltd., Greenford, Middx., England in conjunction with Metal Box Ltd., British licensee for Precision valves. Such a device is currently being made in the U.S. by J. G. Machine Works, Inc. after development by J. G. and Precision Valve Corp.

The Aerofill nozzle is reported to be cylindrical in shape and about 2½ inches long. It is screwed into the propellant filling head.

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Pressure Pak Issues Catalog

A six-page illustrated brochure describing its full line of aerosol filling and testing equipment has been issued by Pressure Pak, Inc., P.O. Box 2587, West Palm Beach, Fla. Three pages of the brochure are devoted to a text and photograph instruction on the operation of the company's "Model 1000-M" manually-operated filling machine which includes product filler, crimper, gasser, and pressure tester.

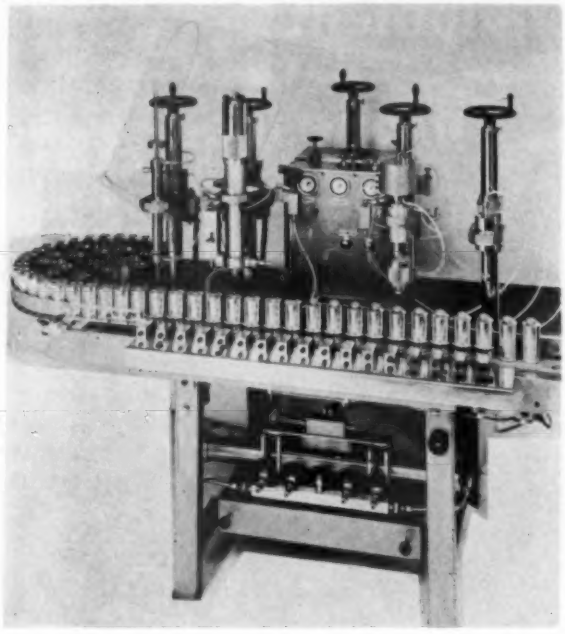
Also described are its aerosol crimping gauge, leak test tank, bottle and vial crimper, and can crimper, as well as the "Visual Test Kit" for testing various foam, spray, or mist formulations. Among the accessories described are valve adapters, nitrogen regulators and connecting hose, propellant line strainer, and dial scales.

•

British Co. Expands Line

Betts & Co., Elthorne Road, London N.19, England, last month announced an expansion of its aluminum aerosol can line to include cans with three types of shoulders—an angled shoulder, a crown or corrugated top, and a rounded shoulder. The range of containers includes capacities from 10cc. to 6 ounces in diameters of ⅞", 1⅜", and 53mm. All but the larger units are one piece.

Swiss Company Develops New Filling Line



A new automatic aerosol filling line is being offered by Gebruder Mader, Post Office Box 59, Rapperswill / SG, Switzerland. Called the "PAMA", it operates at speeds of 1200 six-ounce units per hour and includes a rotary unscrambler, can cleaner, purger, filler, crimper, and propellant charger. The entire unit is operated by air and consequently may be used where explosion proofing is required. An illustrated data sheet is available on request from the company.

CMC for Aerosol Fabric Sizes

Hercules Powder Co., Wilmington, Del., reports that its CMC water-soluble colloid is finding increased use in aerosol-packaged fabric sizes and ironing aids. CMC is a water-soluble material which, when dried under the iron, is said to give a unique, non-crystalline, transparent flexible film. Among the characteristics claimed for it are:

1. Resistance to soil penetration and adherence.
2. Stiffness without harshness, due to its flexibility and non-crystalline nature.
3. Elimination of masking difficulties, due to its transparency.
4. Ease of washing. Since it is water soluble it prevents soil penetration of fiber crevices and washes easily.
5. Known retention of whiteness, due to the barrier to soiling and dispersion capacity of CMC.
6. Stability: CMC fabric size formulations are reported to be stable with respect to freeze-thaw cycling.

•

Metal Box Offers Booklet

A four-color illustrated aerosol booklet of 25 pages has just been issued by The Metal Box Co., Ltd., 27 Baker Street, London W.I., England. Called "Push Button Sales" it lists all the aerosol product types, analyzes some of the possibilities for some of the leading ones, and illustrates some of the components and equipment offered by Metal Box to the aerosol industry.

Among the products shown are 4 to 16 ounce tinplate and 2 to 20 ounce aluminum aerosol cans, the complete line of Precision foam and spray valves, plastic and metal overcaps, and crimping equipment. Also illustrated are the company's technical research and contract filling facilities.

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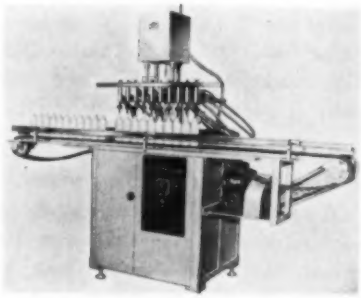
Offer Automatic Filling Machine



Ertel Engineering Corp., Kingston, N. Y., announces a new line of fully-automatic filling machines, either vacuum or gravity fill. The new units are electronically controlled and containers are automatically handled throughout intake, filling, and discharge cycles. Filling time is adjustable to allow for various size containers and different viscosities of products, a feature that eliminates excess overflow and increases speed of fill. Misalignment, breakage and jam-ups are sensed by a "fail-safe" device which eliminates need for a steady operator.

The straight line feature of the units is said to allow for quick changeover to various bottle sizes since there are no star wheels, etc. All metal parts contacting the liquid are of stainless steel. Speed of conveyor is variable. Purchaser can choose from a variety of spouts and can have either vacuum or gravity type fill.

With the addition of this new line, for the first time Ertel now has a complete complement of fillers from portable hand operated through the electronically operated fully automatic machines. Illustrated literature which includes filling speeds for various size containers is available from the company upon request.

•

Issue New Aerosol Booklet

Establishments de Trevise, 42 Rue de la Reine-Henriette, Colombes (Seine), France, a leading European supplier of perfuming materials for aerosol products, has just issued a 73-page booklet on pressurized packaging called "Aerosol 1961".

The first 27 pages of the booklet are devoted to an introduction to aerosol packaging, including a brief history, and chapters on principles, propellants, filling, corrosion, pressure considerations, and other important subjects. Of major interest to the aerosol marketer are some 15 pages of suggested formulations, most of them taken from "Pressurized Packaging (Aerosols)", by Herzka and Pickthall. Ten pages in the middle section of the booklet are given over to a complete price list of the products available to perfume aerosols from Establishments de Trevise.

The booklet is available free of charge by writing directly to the company.

Risdon Offers "Tini Mist"

A decorative, self-contained purse-size dispenser for aerosol fragrances, called the "Tini-Mist," has just been introduced by The Risdon Manufacturing Co., Naugatuck, Conn. The self-contained unit is available in aluminum, stainless steel or glass. All the containers have flared caps of polished, gold lacquered aluminum.

Like the "Mini-Mist," Risdon's refillable purse-size container, the new "Tini-Mist" is equipped with a Risdon metering valve which emits a measured amount of spray. There are approximately 200 bursts in an aluminum or stainless steel "Tini-Mist" and about 150 in a "Tini-Mist" that is made of glass. The "Tini-Mist" is also available in gold lacquered and polished aluminum and stainless steel, silk screened aluminum, and clear or enameled glass.

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PMMI Issues New Directory

A new directory of leading packaging machinery manufacturers is now available from the Packaging Machinery Manufacturers Institute, 60 East 42nd St., New York 17, N. Y. Cost of the director is $7.50. It contains the addresses and names of officers, products and trade names as well as sales office listings of more than 80 PMMI Members. It supplants the Institute's last directory which was printed in 1958.

All buyers of PMMI Directories are recorded by the Institute and will periodically receive insert sheets to keep the directory up to date.

The directory may be obtained by writing to the PMMI headquarters offices in New York, or may be purchased in the lobby at the forthcoming PMMI Institute Show which will be held in Detroit's Cobo Hall from Nov. 7-10.

•

Offer "Modulan" Information

American Cholesterol Products, Inc., Edison, N. J., has just announced availability of a new technical brochure on "Modulan," acetylated lanolin. This brochure presents a comprehensive review of "Modulan" and is aimed particularly at the cosmetic and pharmaceutical industries.

In addition to technical data, specifications, physical and chemical properties, there are a variety of formulations illustrating the functional properties of the acetylated lanolin. These formulas cover both emulsified and anhydrous systems which benefit from the hypoallergenic and emollient character of this oil soluble lanolin derivative. Included are formulas for aerosol shave cream and aerosol hand lotion.

Copies of the new brochure are immediately available from the company at Talmadge Road, Edison, N. J.

•

Directs Breck Market Research

John G. Jennings has been named Director of Market Research and New Products Co-ordinator for John H. Breck Inc., Springfield, Mass. Prior to joining Breck, Mr. Jennings was vice-president for marketing of Noveen, Inc., Denver.

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St. John's Releases Papers

A limited number of the papers delivered at the Industrial Panel of the 1961 Pharmacy Congress sponsored by St. John's University are available for distribution to interested parties, it has been announced by Dr. Andrew J. Bartilucci, Dean of St. John's College of Pharmacy.

The following papers are available:

The Stability of Suspension, by John H. Wood.

A Survey of Quality Control Procedures Applicable to Pharmaceutical Semi-Solids, by Dr. Gilman N. Cyr.

Evaluation of Pharmaceutical Emulsions, by Phyllis Carter.

Maintaining the Stability of Solids, by C. J. Endicott & H. M. Gross.

They may be obtained by contacting Dr. Bartilucci at St. John's College of Pharmacy, Jamaica 32, N. Y.

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VCA Develops New Assembly

V. C. A., Inc., has developed a new 18mm. trigger tip aluminum package equipped with its famous "B18F" metered valve. The trigger tip assembly eliminates the use of an overcap, but still protects against accidental discharge. The aluminum ¼-ounce tube is said to be highly adaptable for screening and other decorations. The linear polyethylene actuator button and nozzle insert can be molded in any color desired. Further information may be had by writing to the company at 1720 Fairfield Ave., Bridgeport, Conn.

•

Nat. Starch Sets New Plant

National Starch and Chemical Corp., New York, last month revealed that land has been purchased on which to build a previously announced $4 million vinyl acetate plant. The annual capacity of the new chemical facility will be 45 million pounds, most of which will be for captive use. The site selected is at Seadrift, Texas. Donald Pascal, president, said that National will purchase its acetylene, a major raw material used in the production of vinyl acetate, from The Alefins Co., a division of Union Carbide Corp.

Construction of the new plant will commence late this year, and the new facility is expected to be in operation late in 1962.

Handle for Larger Cans

A new sturdier spray can handle for the large new aerosol cans has been developed by Alfco, Inc., 4950 South Sepulveda Boulevard, Culver City, Calif. The handle may be used for the new American Can 24-ounce unit or even larger commercial units which may be available soon.

•

Filler for Plastic Containers

A new straight line liquid filler designed particularly for filling plastic containers has been introduced by Perl Machine Manufacturing Co., 68 Jay Street, Brooklyn 1, New York. A semi-automatic unit with six valves, the "Model BOS-P" has a production capacity of 700 gallons per hour. Designed to overcome the problems usually encountered in filling plastic containers, it reportedly will handle all size containers made of any plastic. Within the filling range of the machine, the changeover from one size container to any other is quickly and easily accomplished without the use of extra changeover parts.

Operated by foot pedal, it fills each container precisely. The accuracy of the fill is assured by micrometer screw adjustments and almost any kind of liquid can be handled. For easy cleaning and to prevent contamination, all contact parts are made of stainless steel with connecting tubings made of sanitary, corrosion-resistant, transparent flexible plastic. The Model BOS-P can also be used for filling glass or metal containers.

FDA Issues Cosmetics Warning

Users of cosmetics were advised by the Food and Drug Administration last month not to fall for beautifiers with mysterious "miracle" ingredients. The warning is included in FDA's third revision of an illustrated consumer information booklet called "Read The Label." More than 200,000 copies of previous editions have been distributed to homemakers, educators and students throughout the United States.

"Cosmetics properly used can help greatly to improve one's appearance," the booklet states. "But don't fall for products that claim to 'restore youthful skin,' 'grow hair on bald heads,' or other far-fetched promises that appeal to natural desires to be young and attractive. Beware especially of cosmetics claimed to have some mysterious miracle ingredient, such as 'royal bee jelly,' 'turtle oil,' or something equally outlandish. The cosmetic label is not required to list the ingredients. When they are played up it's for promotional reasons."

Reflecting changing problems of consumer protection, the new edition covers "health foods" and vitamin-mineral products and their promotion by door-to-door salesmen; vibrator devices for weight and figure control; new safety controls on colors; and the importance of reading and heeding warning labels on drugs and household chemicals. It has been revised to cover the latest package and label requirements of the Federal Food, Drug and Cosmetic Act, plus the Federal Hazardous Substances Labeling Act, passed in 1960.

In announcing the latest revision of "Read the Label," Commissioner of Food and Drugs George P. Larrick said: "One of the ways you can be certain of getting your money's worth is by reading labels when choosing foods, drugs, therapeutic devices, and cosmetics. And for the safety of the family it is important to keep on reading labels on drugs, devices, and household chemicals while such products are in use or stored in the household. Labels contain information required by laws which Congress has enacted for your protection — but if you do not read the label you are losing the benefits of that protection."

The booklet covers what the FDA thinks every American consumer should know about the packaging and labeling provisions of the Federal consumer and user protective laws. In simple form—with cartoon drawings — it shows consumers what to look for on labels and tells how to use label information to safeguard health and pocketbook.

First published in 1951, "Read the Label" has been one of the most popular pieces of consumer information material ever produced by the Food and Drug Administration. The new edition, "Read the Label on Foods, Drugs, Devices, Cosmetics and Household Chemicals," is available from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., for 20 cents.

•

Miller Completes New Line

Installation of a new high-speed filling line for chemical specialties, described as the first such non-paint line in the Northwest, was completed last month by Miller Products, Inc., Portland custom filler and marketer. Miller Products has a 41-year history in the agricultural chemicals industry, is headed by Roy Miller, 73, who left a career as director of agriculture at Idaho State College to found the company in 1920.

•

"Fair Trade" Champion Dies

John W. Dargavel, executive secretary of the National Association of Retail Druggists for 29 consecutive terms and the leading United States champion of the "fair trade" concept, died Oct. 9 at the age of 67. He is given a major share of the credit for passage of the McGuire Fair Trade Bill and for the past three years has been the guiding hand behind ill-fated efforts to push through the Harris-Humphrey Fair Trade Bill.

A graduate from the University of Minnesota College of Pharmacy in 1915, he operated his own retail drug store in Minneapolis for 20 years. He was elected executive secretary and general manager of NARD in 1933.

½ MILLION AEROSOL CAN CRIMPS WITHOUT ANY SIGNS OF WEAR... anywhere

Model No. APCR1 Crimper Assembly for 1" Can Valves

Never before has an aerosol valve assembly crimping collet received such acclaim for performance and dependability. "Over 500,000 crimps so far," a leading product packager states, "and still going strong. No signs of wear anywhere on the plungers or crimpers." You can now avail yourself of a fine, reliable 1" crimping collet at low cost... in a new exclusive advanced design that has proved itself on the assembly line.

- no "hang-ups," no "pick-ups," no down-time for adjustments
- greater area of contact for maximum sealing
- far out-performs any other crimper in valve assembly speed and continuous operation
- thoroughly engineered and machined like finest precision tools
- made of specially selected materials properly heat treated, hardened and ground

If you are not using Royal Aerosol Crimpers, it is costing you money. Remember—we have never had a crimper returned—a fine testimonial of complete user satisfaction!

10-DAY FREE TRIAL
We are so confident of the quality and performance of this line tested crimper that we will gladly send you a unit prepaid for 10-day free trial. Convince yourself in your own plant.

Write or Call Today for Full Details and Literature

A complete line of Aerosol Crimping Collets, Valve Hub Crimpers and Dip Tube Feed Collets

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For A Better Crimp In Your Business

Five Years Ago This Issue . . .

BACK in the dim, hazy days of November, 1956, these items from the page of *Aerosol Age* attracted the chief attention:

1. Dupont announced price reductions on "Freon" 11 and 12 from all three of its plants then producing the propellant. At the same time the can companies announced price increases.

2. Helene Curtis Industries announced the purchase of the Lentheric Division of Olin Mathiseon Chemical Corp.

3. The container picture brightened somewhat with the introduction of an impact-extruded can by Peerless Tube and the development of nylon containers for aerosol products by DuPont's Polychemicals Division. Precision Valve, National Plastic Products and Plax Corp. were among the companies reportedly fabricating the nylon bottle.

4. Stalfort Pressure Pak, Baltimore, announced a new expansion of its aerosol filling plant. The company was then operating 3 separate lines with a combined production capacity of 300 cans per minute.

5. C.C. Lang & Son revealed a widespread merchandising and advertising campaign for its "Real Kool" pressurized fruit concentrates. This was the first food product in any volume outside the whipped topping category.

Stock Exchange Lists ATI

Stock of Aerosol Techniques, Inc., Bridgeport, Conn. filler, was admitted to trading on the American Stock Exchange on October 16. ATI thus became the first company wholly devoted to the manufacture and packaging of aerosols to be listed on a major stock exchange. The company's ticker symbol is ATQ. The specialists for the stock are Andrews, Posner & Rothschild; Kaufman, Alsberg & Co., and Kimm & Co.

In opening ceremonies on the floor of the American Stock Exchange, H. R. Shepherd, president of ATI (right in photo), received the welcome of the exchange president, Edward T. McCormick, Later Mr. Shepherd and other officers of Aerosol Techniques were guests at a luncheon in the exchange dining room. Aerosol Techniques, which was founded by Mr. Shepherd in 1955, became publicly owned last February and until now has been traded over the counter.

•

Ready "Anti-Fair Trade" Bill

An "anti-fair trade" bill will be introduced at the next session of Congress by Rep. John D. Dingell (D.-Mich.), outspoken opponent of fair trade legislation. Rep. Dingell's measure will "protect consumers against the predatory effects of price fixing and so-called 'fair-trade' laws," he told a Washington meeting of the National Association of Consumer Organizations in October.

He told the association that his bill is aimed at "prohibiting price fixing arrangements under which manufacturers of consumer goods can force retailers to charge the consumer a high price by the simple expedient of announcing its price and then bringing court action against retailers who do not adhere to it."

Rexall Buys White Metal

Rexall Drug and Chemical Co., Los Angeles, late last month announced an agreement had been reached for the acquisition of White Metal Manufacturing Co. for an undisclosed number of shares of Rexall stock.

White Metal Manufacturing, with sales offices at 445 Park Ave., New York, and plants in Hoboken and Hawthorne, N. J. and Indianapolis, Ind., is one of the leading producers of collapsible metal tubes, slugs and aluminum cans used by many leading U.S. manufacturers. Justin Dart, president of Rexall, stated that the acquisition of a metal tube manufacturing company would complement Rexall's container and packaging division.

Stanley M. Rumbough, Jr., who has been serving as president will become chairman of the board of White Metal. Charles Stiassni, presently executive vice-president and treasurer will be appointed president.

•

Kaiser Enters Fluorocarbon Field

The possibility of a fifth producer of fluorinated hydrocarbon aerosol propellants became nearer last month with the announcement by Kaiser Aluminum & Chemical Corp., Oakland, Calif. that it is constructing a $6 million hydrogen fluoride and fluorocarbons plant at Gramery, La. Already producing fluorocarbon propellants for the aerosol field are DuPont, General Chemical Division of Allied Chemical, Pennsalt Chemicals, and Union Carbide.

The new plant will be built adjacent to a previously announced $1.4 million aluminum fluoride plant and will supply it with hydrogen fluoride. And according to Kaiser president D. A. Rhoades, fluorocarbons, possibly including refrigerants and aerosol propellants, will also be marketed. The annual capacity of the new plant was not estimated, but both plants are expected to be in operation late next year. Kaiser's Gramery Works are located on a 3200-acre tract on the Mississippi River halfway between New Orleans and Baton Rouge.

Artist Uses Aerosols for Textile Design

Most artists do their painting on canvas with paint and brush, but Marlane Norris, Baltimore fashion illustrator, relies on spray paints to accomplish specific patterns on fabrics she is designing for various manufacturers. She explains that aerosol paints help her "save time, achieve uniformity of patterns, create special motifs, and achieve color harmony." She points out that aerosol paints eliminate mixing, messy solutions, and can be used and reused without clean-up. Miss Norris is a well-known home economist whose main effort has been in fabric design for leading textile firms.

•

Falcon Offers New Valve

Falcon Alarm Co., Summit, N. J., has introduced a new valve and a "crow's foot" can clip that is now being shipped with all Falcon "Freon"-powered horns, portable and deck mounted models. These have been designed to minimize cross threading problems when replacement cans are screwed onto the horns to provide new propellant power supply.

By doing away with the interior thread around the pierce pin of the valve, Falcon claims to have virtually eliminated cross threading problems, while the three-pronged clip, used in conjunction with a rubber washer around the pierce pin, is said to ensure a tight fit of horn and can without gas leakage. The easy to use clip is simply clipped over the lip of the can, which is then screwed onto the horn.

The new Falcon valve is supplied in chrome to retail at $5.40, and in brass at $4.95, clips included in both instances. The clip itself, manufactured under license agreement with Virginia Chemical & Smelting Company's Patent #2,807,391, has a retail value of 50 cents and will fit all existing Falcon piercing valves.

. . . need a better shave?

What we mean is, do you need a better aerosol shave cream? We have just completed development of a superb formula. It's shelf tested and ready to go. It incorporates hydro-carbon propellant and will not separate in the can, but gives a uniform product. Hexachlorophene has been incorporated into the cream, giving it antiseptic properties resulting in a reduction of skin bacteria. It can be claimed, if desired.

The advantages of this shave cream is its ability to wet and stay wet, its reasonable cost, its low irritation on the skin. We would like to show you (if you are a potential customer, please) that we can back up what we say. We'll send you a sample for the asking.

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Automatic open-and-close cycle of orifice prevents clogging . . .
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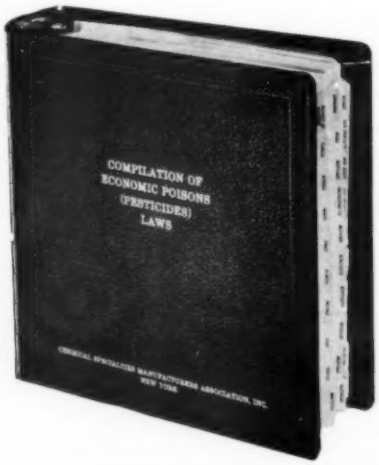
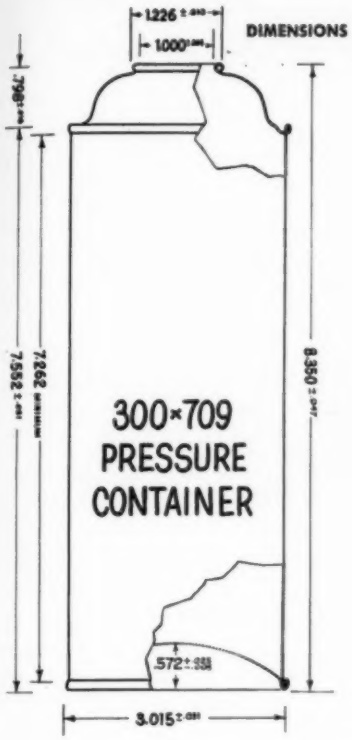


American Can Issues Data on 24-oz. Can



CAPACITY
26.9 Fluid Ounces
48.6 Cu. In.
796 c.c.

CARTON SIZE — I.D.
Single Trip Cartons
24⅜" x 18¾" x 25⅛"
159 cans

3 Tiers 53 Cans each
Number 1 stagger
55 pounds total weight

American Can Co., New York, last month issued a data sheet on its new 24-ounce aerosol can. Official "unveiling" of the new can took place at a special press conference in New York to which suppliers of other components and filling equipment were invited.

Canco's Joseph Fredette declared that the new unit is introduced to stimulate areas in the aerosol industry where "failure of a single can to do a specific job" has hindered market exploitation. Edalene Stohr, Canco's director of home economics, suggested that the new can would find a definite place for spray paints, starches, insect sprays, room deodorizers, moth proofers, insect repellents, and dessert toppings. She admitted that American Can was expecting a good deal of its business to come from institutional users, demonstrating how a restaurant could use one of the cans to decorate a large tray-ful of dessert dishes.

Handling of the cans is expected to necessitate some adjustment of presently designed filling and charging equipment.

Krylon Names Sales Rep.

Krylon, Inc., Norristown, Pa. aerosol paint marketer, has announced the appointment of Sidney Butz & Associates, Inc., 416 Providence Road, Charlotte, N. C., as sales representatives to the automotive trade in the southeastern states. The Butz organization will sell Krylon's spray paints and protective coatings for automotive uses in Virginia, Georgia, North Carolina, South Carolina, Tennessee, Mississippi, Alabama and Florida. Butz & Associates have representatives in Atlanta, Ga.; Richmond, Va.; Nashville, Tenn.; Charlotte, N. C.; Jackson, Miss., and Orlando, Fla.

•

Offer New Aerosol Perfume

Aromatic Products, Inc., New York, has announced development of a new exotic oriental type fragrance called "Tibasia". The fragrance is recommended for aerosol formulations in the following percentages: air sprays (2-3%, air deodorants (.5-1%), hair sprays (.25-5%).

Parfums Anjou selects

Metal Fab's

New *Princess* Style Cosmetic Aerosol Line.... *for the Look of Quality, Low Cost!*

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Designed for Cosmetics, Perfumes, Personalized Sprays.

Accommodates stock size mounting cups and valves of your choice.

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Look to MF to develop a practical, economical solution to your package problem. Let MF direct you to proper styling and design with finished scale models and small runs for market testing.

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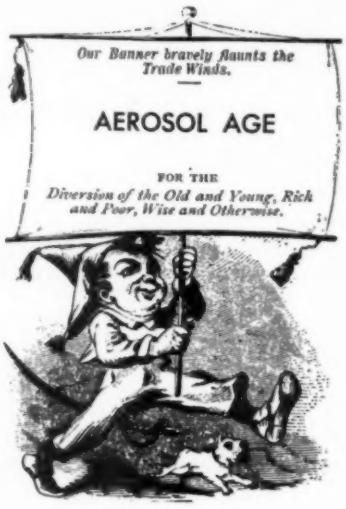
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FOR THE
Diversion of the Old and Young, Rich and Poor, Wise and Otherwise.

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Aerosol Age keeps coming.

Renew Early ! ! !

"See our Exhibit PMMI Show, Cobo Hall, Detroit, Booth 627, Nov. 7-10, 1961"

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ROUND BOTTLES, JARS CANS, CONTAINERS
Get in Line!

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ROTARY UNSCRAMBLING TABLE

- Cartons of bottles, jars, cans or containers are inverted to the tilt top table and their contents pushed onto the revolving disc. Units are *automatically regimented and despatched in single file* to the conveyor.

LOWERS HANDLING COSTS — ACCELERATES PRODUCTION

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Serving Industry 20th Year

Senator Hart is Speaker at Nov. Seminar

The Package Engineering Seminar being held in Baltimore, Md., on Nov. 13 and 14, under the sponsorship of the Society of Packaging and Handling Engineers, will have as the principal speaker Senator Philip A. Hart, (D.-Mich.) who will comment on "Deceptive Labeling and Packaging Practices," a subject that his Senatorial Subcommittee has been investigating. The Seminar, an annual activity in the educational program of the Society, this year is a part of the combined event which includes the 1961 National Packaging and Handling Competition and the 7th Annual Eastern Packaging Show under the auspices of the Maryland Chapter.

More technical and intensive in scope than in previous years, the seminar will comprise four top level panel discussions based on the theme, "Accelerated Product Distribution in the Space Age:"

The Military Build-Up and Government Packaging.

Participating will be Charles A. Lewis of the Department of Commerce, L. C. Heller and H. M. Lapidus of the Navy and Lt. Col. George A. Davies of the Air Force. The talks will range from discussions of aerospace packaging to a graphic breakdown of "Operation Light Pack."

Operational Aspects of Containerization.

Moderated by A. W. Greene, editor of *Distribution Age*. Participants from transportation industries will trace the development of modular containerized package systems. Emphasis will be on such practical considerations as economic analysis of container systems, their degree of carrier inter-changeability and effect on packaging methods.

The Science of Package Cushioning.

A workshop illustrating both theoretical and practical aspects of package cushioning will be presented by James S. Hardigg of Hardigg Industries, Inc., and Richard A. Marciano of the Raytheon Co., Aero Weapons Div. Planned to overcome the obstacle of this subject's complexity, emphasis will be placed on demonstrations, chalk talks and liberal use of test equipment.

Flexible Plastic Foam Packaging of Tomorrow.

Irwin M. Rehm of RCA will head a panel of experts from the basic industries supplying flexible plastic foam — Dow, Nopco Chemical and Armstrong Cork. This will be a technical discussion and demonstration of the relative merits of the major flexible plastic foams in the protective packaging field.

In keeping with the established educational purposes of the Society, this year's show will emphasize the developmental aspects of packaging and handling.

On display at the show will be the entries in the National Packaging and Handling Competition, an activity open to all firms regardless of membership in the Society. There are eight categories of competition with awards in each. It is said to be the only event in this country providing a means of comparative evaluation of the work of professional packaging and handling engineers.

•

Gray to Fritzsche Bros.

James P. Gray has been appointed sales representative for the San Francisco area by Fritzsche Brothers, Inc., New York, supplier of essential oils, and creator of aromatic chemicals, and fragrance and flavor compositions. He had been Eastern sales manager for the Merckens Chocolate Division of Consolidated Foods Corp., and also had covered the Pacific Coast area for the Walter Baker Chocolate Division of the General Foods Corp. His knowledge of, and long experience in, the food industry are in keeping with Fritzsche's expanding volume of business in this field.

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that has *earned* industry acceptance

POWER DRIVEN CODER

With work table area.

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Will mark top, bottom, or both at the same time.

No change parts needed

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Mounts on Conveyor Line or Case Sealer

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Average cost of ink for one code dater for one year is about $3.00

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Barrett Speaks

(*From Page* 39)

in the Johnson aerosol line.

Mr. Barrett revealed that Johnson management first began serious study of the problem of whether or not to install its own aerosol line back in April 1955. In March 1960 the first such line was installed and in the next 14 months, he revealed, the line has produced more than 25 million cans!

The basic question about which line — cold or pressure fill — to install was settled by highly promising results with the under-the-cup charging principle, he said. Johnson engineers studied the problem from the standpoints of speed and efficiency and concluded that this principle would replace cold filling, at the same time allowing for use of other flammable propellants. It was determined that the most practical line speeds were 200 to 250 cans per minute, but such equipment had, up to that time, never been built. Mr. Barrett complimented the equipment suppliers (whom he didn't name) for their willingess to alter equipment to meet Johnson's set standards. But he cautioned other large-volume marketers that even the purchase of "standard" aerosol equipment will require "de-bugging" before the line reaches maximum efficiency.

Through the use of slides, Mr. Barrett showed the following equipment, all part of the Johnson line:

1. semi-automatic depalletizer and unscrambler
2. bottom-up can cleaner
3. piston filler (10-heads in line)
4. rotary valve inserter
5. vacuum crimper and pressure filler, equipped with auxiliary propellant pumps and a heat exchanger.
6. manual button application, which he said is being replaced by an automatic unit.
7. water bath which submerges each can for five minutes
8. labeler
9. rotary capper.

Mr. Barrett reported that the key to maintaining constant line speeds the length of the line is a fixed speed drive controlled by two frequency converters (or alternaters) which are linked to each of the machines on the line. "By changing the motor speed of these frequency converters, the line and each piece of equipment can be changed from, say 50 to 200 units per minute by simply turning a crank."

Asked about safety precautions for filling flammable propellants, Mr. Barrett pointed out that an explosion-proof structure is used to house the valve crimping and pressure filling operation. This, he said, is actually an explosion *relief* housing which in turn is "policed" by an atmosphere analyzer equipped with an alarm. If the alarm sounds, the line is shut down, personnel are evacuated, and steps are immediately taken to detect the leak or malfunctioning machine. One further safeguard is that this area has gratings connected to open sewers, thus enabling small amounts of hydrocarbon to escape without difficulty.

Queried about quality control at such high speeds, Mr. Barrett pointed out that an official weight standard is established by quality control personnel and then this is maintained closely throughout the production of that particular product. Use of tared

LEGAL NOTICE

Statement required by the Act of August 24, 1912, as amended by the Acts of March 3, 1938, July 2, 1946 and June 11, 1960 (74 Stat. 208) showing the ownership, management, and circulation of Aerosol Age published monthly at New York, N. Y., for October 1, 1961.

1. That the names and addresses of the publisher, editor, managing editor and business managers are Publisher, Wayne E. Dorland, P.O. Box 31, Caldwell, New Jersey. Editor, Donald A. Davis, Box 31, Caldwell, N. J.; Technical Editor, Eleonore T. Kanar, P.O. Box 31, Caldwell, N. J.; Advertising Manager, Ralph Dorland, P.O. Box 31, Caldwell, N. J.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Industry Publications, Inc., P.O. Box 31, Caldwell, N. J., Wayne E. Dorland, P. O. Box 31, Caldwell, N. J.; Ralph Dorland, P.O. Box 31, Caldwell N. J.; Eleonore Kanar, P.O. Box 31 Caldwell, N. J.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are. (If there are none, so state). None.

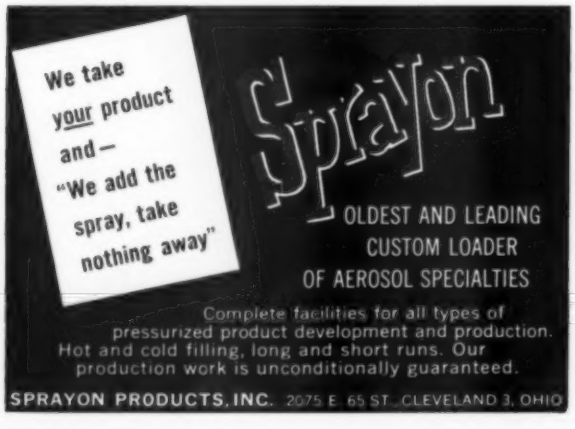
4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: 3334 copies. This information is required by the act of June 11, 1960 to be included in all Statements regardless of frequency of issue.)

Signed—Eleonore Kanar, Business Manager

Sworn to and subscribed before me this 20th day of October, 1961.

(SEAL) David Tryon
Notary Public of New Jersey
(My commission expires May 11, 1964)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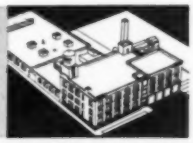

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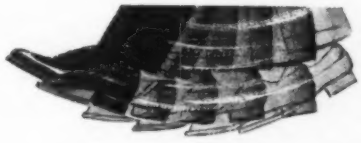

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•

Packaging Inst. Re-elects Zahn

L. H. Zahn, director of purchasing and package development at Ciba Pharmaceuticals, Inc., has been re-elected president of the Packaging Institute for 1961-62. His election was decided at a meeting of the Board of Directors of the Packaging Institute Oct. 17 in the Biltmore Hotel in New York.

Also re-elected at that time were Fred W. Langner, package coordinator of Socony Mobil Oil Co., Inc., as vice president and treasurer; I. G. Nichol, sales manager of national accounts for Morningstar - Paisley, Inc., as vice president in charge of forum activities; and Allyn C. Beardsell, division director of the New Products Division of the Mead Corp., as vice president in charge of membership activities.

W. B. Tibbets, project manager of the Container Development Division of Union Carbide Plastics Co., was elected to serve as vice president in charge of technical committee activities for the Packaging Institute. Also re-elected was Charles A. Feld, who is executive director of the Institute.

The new members of the Board of Directors include: Orlin Johnson, vice president, production, of Bristol-Myers Products Division; N. W. Postweiler, sales vice president, Flexible Packaging Sales Department, Riegel Paper Corp., and W. B. Tibbets. Messrs. Johnson, Postweiler and Tibbets will serve three-year terms as directors of the Packaging Institute.

•

Balkema Honored by PI

The 1961 Professional Award of the Packaging Institute was presented Oct. 19 to E. H. Balkema, director of purchasing for the Colgate - Palmolive Company's Household Products Division, for his record of achievements in the field of packaging. Mr. Balkema was honored at the Institute's Annual Awards Dinner, a highlight of the 23rd National Packaging Forum at the Biltmore Hotel in New York City.

One of the founders of the Packaging Institute, Mr. Balkema has been dedicated to the advancement of packaging on a professional level. In addition to his service for the Institute, he has distinguished himself through his work in establishing printing standards and standardized form design methods. Among his contributions to packaging can be included the development of various substitute packaging materials for wartime applications, and the development and promotion of a quality control system for folding cartons.

The 1961 Professional Award winner has been a principal proponent of standardization of specification of color. In addition, he has played an important role in bringing into general use the Sutherland Rub Tester, a device to test the resistance of a printed ink film to damage when subjected to rubbing, and has been instrumental in developing a device for the accurate measuring of corrugated cases. Finally, he is noted for having exerted a very great influence on the general quality improvement of paper packaging materials in the industry.

Mr. Balkema was appointed head of Colgate - Palmolive's Package Engineering and Printing Department in 1942, and became general purchasing agent for paper products in the purchasing department four years later. He was named director of purchasing for Colgate's Household Products Division in 1957. He also has been active in Packaging Institute affairs, having served as a vice president, director, and as a chairman of key groups.

The Professional Award is presented annually to the individual who is deemed worthy of special recognition because of his pre-eminence in, and contribution to, the field of packaging technology. It is intended that it constitute the highest honor for technical achievement in packaging that can be conferred upon an individual in this country.

•

Gillette Elevates Perry

Gillette Co., Boston, has elected Robert S. Perry vice president. He had been vice president and assistant to the president of the company's Safety Razor Division.

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All we've got to say is on page 57

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Insecticide Laboratory

(*From Page* 34)

ing about one-third of Niagara's research staff, will occupy the just completed quarters. Niagara also operates laboratories at Richmond, Cleveland, Jackson, Mississippi, and in FMC's Chemical Research and Development Center at Princeton, N. J. Dr. Robert L. Gates is director entire Niagara Division. ★

Aerosol Congress

(*From Page* 25)

before another full Congress, including the exhibits, will take place; and decision was made to hold this 1963 Congress in London. A regular meeting of F.E.A. will be held in 1962, either in March or June, at a place to be selected later. The date will be set either in advance of, or following, the mid-year meeting of the Chemical Specialties Manufacturers Association in the United States, to make it possible for the president of F.E.A. to attend the C.S.M.A. meeting and also so that it will be possible for more visitors from the States to attend the European meeting. Incidentally, there were 25 to 30 representatives from the U.S. at the Lucerne Congress.

One of the papers from the Lucerne Congress appears in full elsewhere in this issue (pg. 34). It reviews important considerations in "The Formulation of Aerosol Paints and Lacquers" and was presented by C. A. Southby, chief chemist of Aerosol Packaging Co., Ltd., Bracknell/Berkshine, England. To be carried in the next issue is a paper by Dr. J. J. Sciarra, St. John's University, New York, called "Development of Pharmaceutical and Medicinal Aerosols in the United States."

Next month *Aerosol Age* will continue its coverage of the Congress with a condensation of the following: a review of the comments by R. A. Fulton, U.S.D.A. who was a late addition to the list of Congress speakers; "Valve Characteristics" by Dr. H. Meuresch, International Aerosol Laboratory of Precision Valve International; and "Weighing Problems in Aerosol Filling" by B. Medlundh, technical director of Skandinaviska Aerosol AB, Stockholm, Sweden.

Scheduled for later coverage are the following: "Aerosol Containers" by Dr. K. Jacobi, director, J. A. J. A. Schmalbach AG, Braunschweig, Germany; "An Examination of the Flammability of Aerosols" by Dr. W. Roth, J. R. Geigy AG, Basel, Switzerland; "Aerosols in Italy" by Count R. Scribani Rossi, Bombrini Parodi-Delfino S.p A., Rome; and "Problems of Varnish and Printing Colors for Aerosol Containers" by Z. E. Kozicki, Vernicolor AG, Meilen ZH. ★

Tamper-Proofing

(*From Page* 32)

tried many types of plastics before settling on an acryl-nitrile as the material best suited for its paint product customers. According to Joseph Gregory, sales manager, the company is also offering a styrene seal for products containing solvents with a low kauri-butanol value. Newman-Green's uses 3 rigid supports and 6 holding projections.

Aerosol Research makes its seals of rigid polyethylene. Stanley Goldberg, president of the company, reports his company's model (8 rigid "breakaway" supports and a continuous holding lip was adapted from a similar seal developed in Europe some four years ago. Because of the simliarity, Aerosol Research is marketing its seal in the U.S. and Canada only. He and Mr. Gregory both report that the demand from paint marketers prompted their companies to begin making the seal.

In price the tamper-proof seals are approximately the same—ranging from $3.50 to $4 per thousand depending on quantity ordered. Warren

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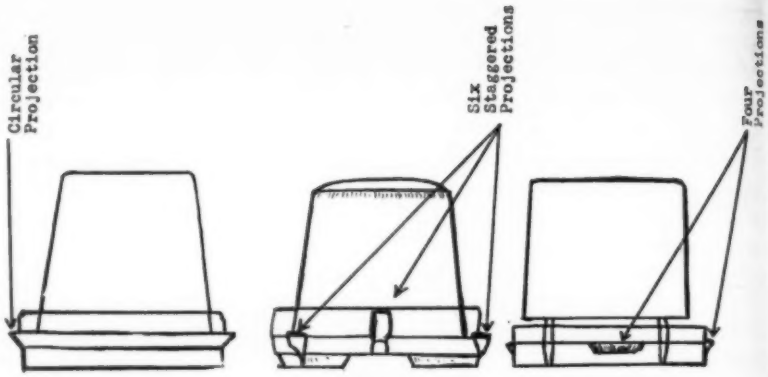
Richards, president of PharmaPlastics, reports that his company's seals can be applied automatically (with a chute-type feeder) or by hand, without "telescoping".

THERE are other older methods of tamper-proofing which have already found use by aerosol marketers. One of the first was use of a cellulose seal applied at the juncture of the large stacking-type overcap and the shoulders of the can to effectively seal the whole valve housing. This is used widely by paint marketers, with the taping operation performed by hand or machine as the last step in the filling line.



Cross-section of three seals

The taped-overcap idea was introduced by Plasti-Kote, Inc., Cleveland paint marketer, for its regular paint line in January, 1960. It uses DuPont's "Cel-O-Sel" cellulose band applied to the containers by means of a John Burton Co. "Cellubander" machine.

A similar method employs the application of a transparent "Cel-O-Seal film to "blister package" the valve actuator. This method was employed by Tropicana Products, Inc. for its line of nitrogen-powered fruit concentrates (which were withdrawn from the market last year).

Most of the other methods so far developed involve either a mechanical addition or some type of alteration of the overcap. Early last year Dupli-Color Products Co., Chicago, another paint marketer, introduced its 'Spra-Lok" cap, a sealed orifice in a stacking cap (with an inner ring of plastic) which must be opened with a key or similar instrument. Although it works, the cost of such a device (plus the fact that it makes difficult normal removal of the cap) have curtailed its use by other aerosol marketers.

Food marketers have adopted another cover-cap variation. A plastic "lever tab" is required to be snapped downward before the cap is removed. This breaks a seal and if it is broken, it alerts the user that someone has been tampering with the seal before the package was purchased. ★

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Sprayon Grants British Rights

Sole rights for distribution of Sprayton's "Jet Pak" propellant cartridge spray dispenser in the United Kingdom have been granted to Swallowfield Aerosols Ltd., Wellington, Somerset, England. Aimed at giving

EAST

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the consumer a relatively inexpensive spray gun, the unit uses a propellant can cartridge to expel paints and other liquids from an attached jar.

New "Glade" Package

(*From Page* 29)

should also pump new life into the entire air freshener field, where there have been relatively few product advances for years. Total retail sales of all air fresheners are estimated at more than $50 million annually, and are trending sharply upward. Total sales in 1960 were up 13% over the previous year.

A thorough program of distribution offers, promotional allowances and consumer advertising support is scheduled for the fall and early winter introductory period.

Mr. Herzog reported the company embarked on the development of "Glade Mist" because of consumer dissatisfaction with many present products and the over-all market growth situation. "Our old 'Glade' product had achieved good distribution and high loyalty by those using it," he said. "But the market as a whole, in the absence of clearly noticeable product and packaging distinctions between brands, had become one where price and scent were primary customer motivations."

In this situation, Johnson's Wax decided to strike out in a new direction to obtain clear distinctions for a new brand, he said. ★

Aerosol Paints

(*From Page* 28)

propellants is affected by the concentration of modifying oil. The purely decorative brush enamels are based on alkyds with a very high concentration of oil. The larger the concentration of oil, the greater then is the tolerance towards aliphatic hydrocarbons. We can therefore see that decorative finishes present little or no solubility problems with regard to aerosol dispersion.

However the main disadvantage with this type of decorative paint is that the time required for it to dry tends to be rather long, being anywhere between two to four hours before being touch dry.

With any form of spray painting, particularly aerosols, it is always advisable to have as short a drying time as possible. This can be achieved by using alkyds of a much lower oil concentration (but with the decrease in oil) so the solubility with the propellants decreases. There are now available commercially certain low oil concentration alkyds which are known as "styrenated" alkyds, which while having a very quick drying time also are infinitely compatible with the low aliphatic hydrocarbons. These new types of resin are now being more widely formulated for aerosols and overcome the problems of compatibility as well as giving very fast drying times.

As I have mentioned previously, the pigmentation of aerosol paints and lacquers is a common factor. Therefore I do not think there is any need to discuss them in conjunction with synthetic air drying enamels. The only major consideration which one has to make in basic formulation is mainly in connection with the solvents. While a resin which is almost infinitely soluble in the propellants can be used, it is important to build into the formulation a safety margin. In this particular instance the use of high aromatic hydrocarbons, such as toluene or xylene, is a necessary safeguard. They will also have the added advantage of reducing the viscosity and therefore lacquers with a higher solids can be incorporated. As these types of resin dry by oxidation and not purely by evaporation of the solvents, it is necessary to include metallic driers as with normal paint formulations. There is no disadvantage in using the standard type metallic driers, such as cobalt, lead, or naphthenates.

HAVING briefly discussed both cellulose and synthetic air drying enamels, it only remains to outline the pressure/consistency relationship. This of course is a common factor and while it will vary to an extent for nitrocellulose and synthetics, basically the broad outline is the same. The pressure/consistency ratio is important insofar as spraying conditions can vary with a variation of either pressure or consistency.

Generally in the paint industry, consistency, or viscosity, is measured through a No. 4 Ford Cup Viscometer and is usually expressed as so many seconds No. 4 Ford Cup. The usual limits for viscosity for any aerosol lacquer lie between 20 and 35 seconds. The viscosity limits for nitrocellulose are between 20 and 25 seconds, while the viscosity limits for the synthetics are much wider, being between 20 and 35 seconds.

To achieve good spraying results the viscosity must be related to the pressure which is exerted by the propellants. At a pressure of approximately 40 p.s.i.g. (and with a viscosity of between 20 and 25 seconds), perfect results can be achieved with nitrocellulose lacquers. If the pressure is dropped to between 30 and 35 p.s.i.g., the film will tend to orange peel due to very poor after-flow characteristics. Conversely the same defect will occur if the viscosity is increased to above 25 seconds while the pressure is maintained at 40 p.s.i.g.

Pressure, of course, can be controlled to a certain extent by the choice of solvents. Some of the aromatic solvents will form azeotropic mixtures with the propellants and while this will generally decrease the pressure slightly it will also tend to decrease the viscosity and therefore still give relatively good spray characteristics.

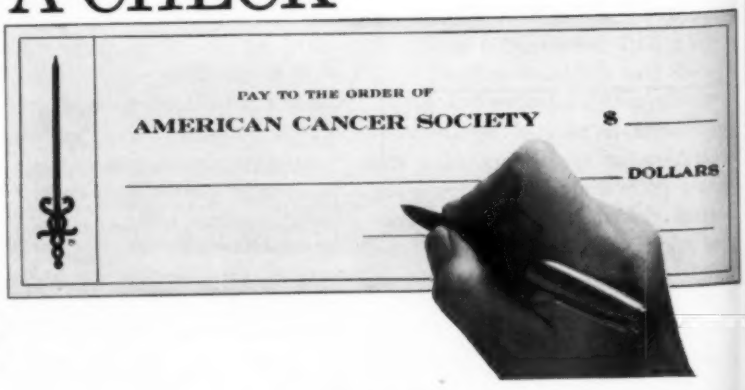
The most common defects with aerosol paint spraying are classified under the following main categories:

Sagging
Bubbling
Cratering
Pin-holing
Orange peeling

Basically all of these faults are due to incorrect solvent blends or incorrect pressure/consistency ratios. ★

FIGHT CANCER

AND A CHECK



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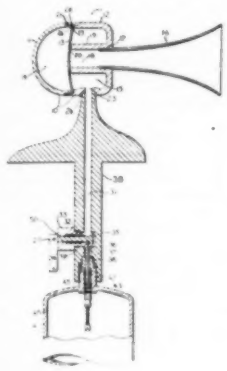
New Aerosol Patents

Listed below is a brief review of recent patents pertinent to the aerosol and related industries.

Complete copies of these patents may be obtained by writing to the Commissioner of Patents, U. S. Patent Office, Washington 25, D. C., and remitting 25 cents for each copy desired.

3,000,344. POWER HORN. Issued Sept. 19 to Donald Ferrell, 158 Cayuga St., Groton, N. Y.



A self-contained sound producing unit comprising a sound producing unit having a tensioned diaphragm, a disposable container of fluid under pressure, a control valve connecting said sound producing unit and said disposable container, said valve forming means for controlling the operation of the said sound producing unit, said sound producing unit comprising a casing having a forward member and a rearward member, said tensioned diaphragm dividing said casing into a forward pressure chamber in said forward member and a rearward pressure chamber in said rearward member, said diaphragm being crimped about its periphery, a rigid joint being formed between said forward member and said rearward member, a shoulder and groove on said forward member at said joint, a lip on said rearward member at said joint, said diaphragm being adapted to be retained along its crimped peripheral portion by said shoulder and groove and said lip at said joint.

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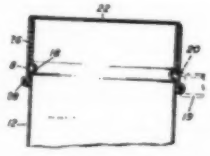
3,001,666. CONTAINER CLOSURE. Issued Sept. 26 to Raymond C. E. Caproni, 7102 Vivian Ave., Dallas, Tex.



The combination of a container having a side wall provided at its upper edge with a downturned continuation superposed on the upper end portion of said side wall and exteriorly of the latter to provide a side wall portion of double thickness, said side wall portion being provided with an outwardly opening circumferential groove in a plane spaced downwardly from the upper edge of the side wall and upwardly from the lower edge of said downturned continuation, and a closure having a top wall extending across the upper end of said container and a circumferential skirt depending from said top wall in surrounding relation with said side wall portion of double thickness, the lower edge of said skirt being connected to the lower edge of said downturned continuation and a circumferential portion of the skirt above its lower edge spanning said circumferential groove, whereby said circumferential portion of the skirt may be severed by a rolling cutter entering said groove without penetrating said side wall portion of double thickness.

•

2,998,684. METHODS AND MEANS FOR CONDITIONING SHAVING LATHER. Issued Sept. 5 to Kenneth S. Corey, Fort Leavenworth, Kan. A method

of heat-conditioning an individual preformed portion of shaving lather extracted from an aerosol dispenser, which comprises contacting the mouth of said aerosol dispenser with the mouth of a resilient flexible wall container while compressing said resilient container so as to deform it, actuating said aerosol dispenser and simultaneously releasing the pressure on said resilient container so as to suck a portion of preformed shaving lather into its interior, disengaging said aerosol dispenser, and heating said resilient container and its lather contents to a temperature suitable for shaving.

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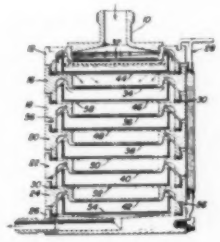
3,001,914. BACTERIAL AEROSOL ANALYZER. Issued Sept. 26 to Ariel A. Anderson, 1074 Ash Ave., Provo, Utah.



A method of classifying according to size and identifying viable microscopic particles suspended in air, which comprises passing a volume of air through a series of stages, each stage containing a Petri dish of solid nutrient medium below a perforated plate having a fixed number of holes, the size of which is constant in each stage but which decreases in size in each succeeding stage, whereby jets of air, produced by drawing air through the device, increase in velocity with each succeeding stage and wherein said velocity increase in each succeeding stage is utilized to separate the microscopic particles into groups of decreasing size and mass, such that the groups of particles are collected by impaction on the nutrient medium of each succeeding stage and particles which are of insufficient size and mass to be impacted on a given stage follow the air stream around the dish into the next stage where the velocity is increased so that by the time the last stage is reached, all viable particles will have attained a velocity sufficient for impaction on one stage or another with the particles having the smallest mass being collected on the last stage thereafter incubating the Petri dishes whereby viable microscopic particles will grow into visible colonies, the number of which represent the number of viable particles collected on that stage.

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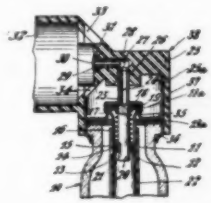
3,001,524. AEROSOL DISPENSING APPARATUS. Issued Sept. 26 to George Louis Maison and Irving Porush, Los Angeles, assignors to Riker Laboratories, Inc., Los Angeles.



A dispensing and administering apparatus suitable for use with a medicament-containing, self-propelling liquid composition for inhalation therapy, comprising in combination an aerosol dispensing container equipped with a control valve means and charged with a medicament-containing, self-propelling liquid composition, said valve means having an operating member having a discharge opening, and an applicator means comprising an actuating means and a delivery tube member, said actuating means being capable of actuating said operating member and having a seat which engages said operating member, said seat having a channel communicating with said discharge opening and said delivery tube member and terminating at the end adjacent said delivery tube member through a narrow orifice, said delivery tube member extending forwardly from said actuating means and providing an unobstructed passage for the aerosol which forms upon discharge of the medicament-containing, self-propelling liquid composition through said discharge means and said channel, said delivery tube means having a substantially straight longitudinal axis, said appli-

cator means having air inlet means proximate to said actuating means, said delivery tube member being capable of administering into a body cavity a dose of medicament in aerosol form to accomplish inhalation therapy without substantial loss of medicament-containing aerosol to the surrounding atmosphere.

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Helen Neuschaefer Is Dead

Mrs. Helen Aherns Neuschaefer, president of Helen Neuschaefer, Inc., College Point, N. Y. cosmetics marketer, died Oct. 9 at the age of 59. She was the widow of Franz L. Neuschaefer, who was president of A. Sartorius & Co., manufacturer of chemicals and cosmetics, at his death in 1942. Mrs. Neuschaefer was well known as one of the best dressed women in the country and won several awards for good business administration.

•

Gene Flack Dies at 66

Eugene W. "Gene" Flack, advertising director and trade relations counsel of Sunshine Biscuits, Inc., died last month at the age of 66. A speaker at many trade conventions, he was a featured luncheon speaker at the 1959 midyear meeting of the Chemical Specialties Manufacturers Association in Chicago.

Mr. Flack weighed about 240 pounds and was nearly 6 feet 5 inches in height. He had a booming voice and he interspersed his speeches with anecdotes and volleys of cigars and other objects which he used to gain the attention of his audience.

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Trade Mark Registrations

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U.S. Patent Office. In not all cases are there strictly aerosol trademarks, however, many of the products listed below come within the category of those for which a possible future use in aerosols is foreseen.

ALKE MIST, for medicated preparation for the treatment of minor burns and superficial skin irritations. Filed Sept. 15, 1960 by Irving L. Landau, d.b.a. I. Landau Co., Cleveland, listing first use as Oct. 1951.

FLORALBA, for antibiotic spray for the control of bacterial wilt on tomatoes. Filed Jan. 3 by The Upjohn Co., Kalamazoo, Mich., claiming first use as Oct. 13.

ACTI-DIONE-CAPTAN, for rose and flower fungicide which controls black spot on roses and mildew on ornamentals. Filed Dec. 19 by the Upjohn Co., reporting first use Dec. 2.

NEVER BEFORE, for cologne. Filed Feb. 27 by Avon Products, Inc., New York, claiming first use on Feb. 7.

SUPRACIDE, for chemical composition used as an ingredient for insecticides. Filed Jan. 31 by Geigy Chemical Corp., Ardsley, N. Y., giving first use as Jan. 3.

WILDWIND, for men's cologne and after shave lotion. Filed Dec. 12 by Angéé Manufacturing Co., d.b.a. Angéé Laboratory, Carmi, Ill., reporting first use April, 1960.

PELLAR, for antifungal preparation. Filed May 31 by Crookes-Barnes Laboratories, Inc., Wayne, N. J., with first use claimed for June 30, 1960.

ARITA, for insect repellent. Filed Aug. 3, 1960, by Ciba Ltd., Basel, Switzerland, giving first use as per Swiss patent of July 23, 1945.

FLOWER GUARD, for combination insecticide, fungicide, and miticide. Filed Dec. 7, 1959, by Shulton, Inc., Clifton, N. J., claiming first use for Oct. 15 of same year.

FLAROMA, for perfumes, toilet waters, and bath products. Filed Feb. 24, 1960, by the Abietsan Manufacturing Co., Ltd., London, England, reporting first use as per British patent dated July 11, 1932.

ADVICIN, for topical antifungal preparation. Filed May 18 by Schering Corp., Bloomfield, N. J., with first use given as May 5.

PETITE SIXTEEN, for cologne. Filed Dec. 16, 1958, by Park & Tilford, d.b.a. Tilford Toiletries, New York, with first use reported as Oct. 23 of same year.

L.C.D., for topical therapeutic preparations. Filed Sept. 8, 1960, by Schieffelin & Co., New York, claiming first use March 10, 1947.

MILKFOAM, for permanent wave solution. Filed Nov. 30 by Ellen Kaye Laboratories, Inc., St. Paul, giving first use Feb. 27, 1959.

LAVENDER AND OLD LACE, for preparation for killing moths, preventing mildew, and an air deodorant for clothing closets. Filed Nov. 10 by Carson Chemical Corp., Brooklyn, N. Y., reporting first use July 2, 1957.

AQUASOLAROME, for water soluble compound for use in manufacturing floral waters and toilet lotions, and as a flavor ingredient intended for food purposes. Filed April 20, 1960, by Florasynth Laboratories, Inc., New York, with first use reported as March 23, 1933.

TOPAZE, for perfume, spray perfume, cologne, cologne mist, and other cosmetic products. Filed Sept. 19, 1960, by Avon Products, Inc., New York, with first use claimed for February, 1935.

SPRAY A TAPE, for aerosol adhesives for home and office use. Filed March 24 by Spray A Tape, Inc., Boston, with first use reported as Jan. 12.

CL-1301, for germicide-deodorant for household and/or industrial use. Filed Oct. 27, 1960, by Marveli Industries, Pasadena, Calif., claiming first use on July 19 of previous year.

DECO-SPRAY, for paint, enamel, and lacquer. Filed May 24 by Sears, Roebuck and Co., Chicago, reporting first use on Dec. 23, 1959.

"ALERT," for window cleaner and prewax cleaner for all types of floors, and for silicone cream polish and cleaner and polish for porcelain, glass, and metal. Filed Dec. 15, 1959, by John C. Stalfort & Sons, Inc., Baltimore, Md., claiming first use June 15, 1959.

THE FIRST ROSE and NIGHT FIRE, both for cologne. Both filed Dec. 27 by the Fuller Brush Co., East Hartford, Conn., giving first use in June, 1960.

SPRAY GIFT, for toilet water. Filed Feb. 1 by Houbigant, Inc., New York, reporting first use on July 21, 1960.

•

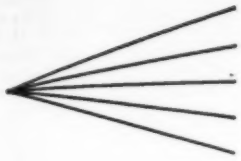
Heath Heads Aircraft Firm

George W. Heath, former vice president and general manager of Kartridg-Pak Co., aerosol equipment supplier, has just been elected president of the United Aircraft Supply Corp., Chicago. The company assembles and distributes electronic and mechanical components for military aircraft and industry. Mr. Heath had been a vice president of United Aircraft Supply.

•

Plastic Container Co. Formed

A new company has been incorporated in Los Angeles County, California, to manufacture plastic pressure containers. Called Airmold Corp., it is headed by James A. Flanagan and R. Virgil Allen of 453 Spring Street, Los Angeles.



CLASSIFIED ADVERTISING

Address all classified replies to Box Number c/o *Aerosol Age*, PO Box 31, Caldwell, N. J. Rates for "Help Wanted" advertisements are 20¢ per word; minimum charge $3.00. Rate for individuals seeking employment is 5¢ per word, $1.00 minimum. Advertisements of new machinery, products and services accepted at the rate of $10.00 per column inch. Minimum space, one inch. Copy closing date, 10th of preceding month. *Checks must accompany all orders.*

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Tiffany No. II

"The greatest advance in aerosol paint history"

- Brilliant gloss
- Great durability
- Non-toxic
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- Moderately priced

Available in bulk to U.S. fillers for sale in U.S. only. Foreign distribution exclusively *contracted.*

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CHEMIST — AEROSOL. International Manufacturing Company, located in the East, offers excellent opportunity to qualified Aerosol Chemist with a degree plus experience in formulation and knowledge in cosmetics, household products and/or pharmaceuticals. Send complete resume (confidential), include starting salary requirements. Address Box 271, c/o Aerosol Age.

AEROSOL CHEMIST with strong background in industrial and commercial products. Some cosmetic experience desirable. Capable of assuming full charge of existing R&D laboratory as well as Quality Control Lab. East Coast Location. Send resume and salary requirement in first letter. Address Box 272, c/o Aerosol Age.

Mentecki Speaks to SCC

The last 1961 meeting of the Chicago Chapter of the Society of Cosmetic Chemists will feature Alfred P. Mentecki of the Becco Chemical Division, FMC Corp., speaking on "Hydrogen Peroxide Stability in Cosmetic Formulations."

Mr. Mentecki received the degree of B.S. in chemistry from Canisius College, in June, 1947. He then spent two years in military service. Mr. Mentecki has been with Becco Chemical Division since January, 1953. Through June, 1957, he worked on inorganic applications of Peroxygen compounds. Experimentation during this interval resulted in the issuance of a patent in March, 1961, on the use of sodium perborate as a bleaching agent in the home laundry. Since July, 1957, his endeavors have been concerned with customer service, especially with resolving compatibility and stability problems encountered by cosmetic manufacturers and other users of dilute hydrogen peroxide and solid Peroxygen compounds.

The meeting will be held on Tuesday, Nov. 14, at Henrici's Restaurant in the Merchandise Mart. Dinner will be served at 6:30 p.m. and the meeting begins at 7.30 p.m.

•

Fritzsche Adds to Sales

The addition of two new sales representatives in the Chicago area has been announced by Fritzsche Brothers, Inc., New York, supplier of essential oils, aromatic chemicals, and flavor and fragrance compositions. Russell E. Bull and Everett H. Johnson, Jr., join Fritzsche sales veteran Carl Edwards in a stepped-up program to meet the growing demands of the important Chicago market.

The new representatives bring more than a quarter century of specialized experience to the Chicago office of the 90-year-old firm. Mr. Johnson comes to Fritzsche from Polak's Frutal Works, prior to which he represented the Chicago branch of Wilson & Co. Mr. Bull, formerly of Procter & Gamble, has been with Fritzsche for some 14 years in the St. Louis area.

Committee Studies FDA

The Citizens Committee to study the operation of the Food and Drug Administration (Department of Health, Education and Welfare), has been appointed. Chairman of the committee is Dr. George Y. Harvey of University of Missouri and former chief clerk of the House Appropriations Committee.

The other members of the committee are:

Dr. June Bricker, executive director, American Home Economics Association.

Nelson Cruishank, director, AFL-CIO Dept. of Social Security.

Dr. William J. Darby, head of Biochemistry Dept. at Vanderbilt School of Medicine and chairman of the National Research Council's Food Protection Committee.

John T. Connor, president, Merck & Co.

Dr. Conrad A. Elvehjem, president, University of Wisconsin.

Dr. Jerome Holland, president, Hampton Institute.

Bradshaw Mintner, Washington attorney, former Assistant Secretary of Health, Education and Welfare.

Bobby C. Pappas, chairman, Louisiana State Restaurant Association.

J. L. Poses, president, Parfumes D'Orsay.

Alan C. Richardson, mgr. Technical Advisory Service, California Packing Corp.

Dr. R. Blackwell Smith, Jr., president, Medical College of Virginia.

Joseph F. Lakey, dir. Div. Foods and Drugs of Texas State Dept. of Health, and secretary-treasurer, Assn. of Food and Drug Officials of U.S.

Charles E. Palm, dean, N. Y. State College of Agriculture, Cornell University.

I. J. Silverman, president, W. F. Schrafft & Sons Corp.

Dr. Henry F. Vaughn, dean emeritus, Graduate School of Public Health, University of Michigan.

The committee will concern itself with the administration of the law and not with future legislation.

Rutgers University Offers Perfume Analysis Conference

RUTGERS University, which has pioneered college instruction in the compounding and identification of perfumery materials, will hold a two-day conference on "An Analysis of Quality Standards of Perfume Materials" on Dec. 6-7. Designed to demonstrate the usefulness of quality standards to the perfume industry, the conference will be conducted in the Military Park Hotel, Newark, N. J., beginning 9 a.m. on Wednesday, Dec. 6. Methods and techniques of instrumental analysis will be related to the individual creativeness of odor analysts and chemists.

The conference will be opened by Al Fiore, manager of market development for the Givaudan Corp., who will analyze "Quality Standards in Perfumery Materials". He will be followed by V. Daniel Johnston, chief analytical chemist for Givaudan, who will discuss "Chemical and Physical Methods of Analysis and Their Significance".

In the afternoon James Rodgers, director of the instrumental laboratories at Fritzsche Brothers, Inc., will describe "Instrumentation Techniques as Applied to the Quality Standards of Perfume Materials." Lewis Hediger, director of organoleptic control for Trubek Laboratories Inc., will follow with a discussion of "Organoleptic Techniques as Applied to Industrial Perfumery Quality Standards."

On Thursday morning, Fred C. Theile, research administrator for Shulton, Inc., will speak on the coordination of chemical analysis and organoleptic techniques. Then Donald E. Dean, manager of control and the analytical laboratory of Shulton, is scheduled to report on performance evaluation and stability testing of perfume and essential oil materials.

The concluding session will be a panel discussion on some of the problems in the standardization of perfume materials by Harry Saunders, research perfumer for Givaudan; George H. Fuller, manager of perfumery and essential oils research and development at Colgate-Palmolive Co., and Oliver L. Marton, chief perfumer for Shulton, Inc.

The conference will be conducted by the Rutgers Newark Extension Center and the University's School of Chemistry. Registration information may be secured by writing Frank Dee, Rutgers Extension Center, 601 Broad Street, Newark, N. J. or calling MItchell 3-1766.

•

Colgate Gives Dental Grant

A grant of $30,000 has been made to the International Association for Dental Research by the Colgate-Palmolive Co., New York "to facilitate and promote the broad exchange of dental science data and information on oral health developments internationally." The grant was intended specifically to support the association's international symposium on oral biology, which is scheduled for Bonn, Germany, in July, 1962.

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Supplying internationally for aerosols

- Laboratory Equipment
- Production Machines, All Types
- Formulations and Concentrates
- Plant Layout — Consultation

1. Laboratory Clincher DP-104 Inter-changeable Tools for Metal Cans and Glass Bottles.

2. Laboratory and Small-Run Pressure Loader DP-110

3. Propellant Pump WM-DP 385 Fully automatic, compressed air operated. Empties cylinders, mixes propellants, guarantees liquefaction.

4. Valve Clincher WM-DP 350 Semi-automatic, compressed air operated. Capacity: 28-30 per min.

5. Nitrogen Gasser WMP-DP 390 Semi-automatic, compressed air operated. Capacity: 28-30 per min.

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Sales Representative:

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Felton Joins Shulton

The appointment of Robert L. Felton as exploratory chemist has been announced by Shulton, Inc., Clifton, N. J. Prior to joining Shulton, he headed his own consulting firm, New Drug Coordinates. Before that he was associated with Philadelphia Ampoule Laboratories.

Mr. Felton received his B.S. from the University of Illinois, following which he did graduate work at the University of Michigan and the University of California (Berkeley). He is a member of the American Chemical Society, Society of Cosmetic Chemists and the American Association for the Advancement of Science.

Shieffelin Heads DCAT Assn.

The Drug, Chemical and Allied Trades Association has elected William J. Schieffelin president at its annual meeting Sept. 16 at Pocono Manor, Pa. He is vice-president of Schieffelin & Co., wholesale drug house. The DCAT was formerly part of the N. Y. Board of Trade.

Spray Patterns

AMID all the speculation at the International Aerosol Congress in Lucerne as to the possible consequences of the split between Precision Valve and Airkem, came another valve development of international interest. A. O. Samuels, former president of Connecticut Chemical Research Corp. and after that a chief executive officer of B. T. Babbitt, announced sale of European rights to a patent he holds on a metering button to Harry Holm, president of Aerosol Fyldning AS, Oslo, Norway. Mr. Samuels' appearance at the congress came somewhat as a surprise, since until now his motel business in New England seemed to be occupying all of his time.

Should Britain and the other members of the "Outer Seven" join the European Common Market, the U.S. aerosol industry may soon have to look to its laurels to maintain its numerical superiority when it comes to aerosols. As will be seen by the story on page 20, the European market may fast be approaching the 250-million unit mark. With a booming economy and a sound commercial exchange via the Common Market, Europe could overhaul the U.S. in total aerosol volume within the next three to five years!

* * *

As with most aerosol meetings, there was no scarcity of cocktail parties in Lucerne. Tom Johnson was host for one given by Du-Pont and another was given by Precision Valve.

* * *

The CSMA meeting in New York next month will be one of the best attended yet. Suites at the Hotel Roosevelt were sold out almost immediately after the CSMA office announced their availability, and pre-meeting registrations are reportedly very high. Program for the Aerosol Division includes one joint session with the Disinfectant Division which should attract considerable interest.

* * *

Working with a "beefed-up" budget, the CSMA Aerosol Division Publicity Program is going great guns this year. Local and big city newspapers, national magazines, and other media appear to be finally recognizing the importance of the aerosol package.

* * *

As this issue went to press, Olin Mathieson Chemical Corp. announced a new chemical that sterilizes rather than kills the housefly. Called Apholate, it may be sprayed on surfaces or directly where a fly might eat it. Commercial introduction will take place in 1964.

* * *

In the unlikely event you missed it in the forward part of this issue, let us point out again that Durazone-Choice Ltd., British aerosol marketer and winner of last year's CSMA Aerosol Package Contest, also won this year's European Aerosol Packaging Competition. Held at the International Aerosol Congress, this competition attracted some of the best packages in the world — so Durazone's feat (with its de-icer) is no small one.

* * *

Richard Hudnut, Ltd., British subsidiary of the American company of the same name, last month introduced a pressurized men's hair grooming product for the British market. Called "Headline", it will cost about $1.60. A large professional size will soon be produced.

* * *

One exciting new product development still in the test marketing stage is an anti-perspirant powder product called "Shield" reportedly being trial marketed by Lever Bros. in several cities of the country.

"I still say that new propellant won't do!"

Some examples of filling with hydrocarbon propellants at Peterson Filling

PRODUCTS LAUNCHED WITH HYDROCARBON PROPELLANTS

Propel Sales UPWARD — Cost Less Per Package Unit

Here at Peterson Filling, we are fully equipped for high-speed filling of pressurized units utilizing hydrocarbons (propane, butane, iso-butane, etc.) as propellants *with consequent savings in your costs per package-unit.*

Ideal for a wide range of products, these propellants are popular for use with starches, polishes, cosmetics, shaving cream, window cleaners, charcoal starters and many others.

We also fill pressurized units using halocarbons, nitrogen, or carbon dioxide and other inert gases. For *all* your filling needs... *including gravity liquid filling*... write, wire or phone...

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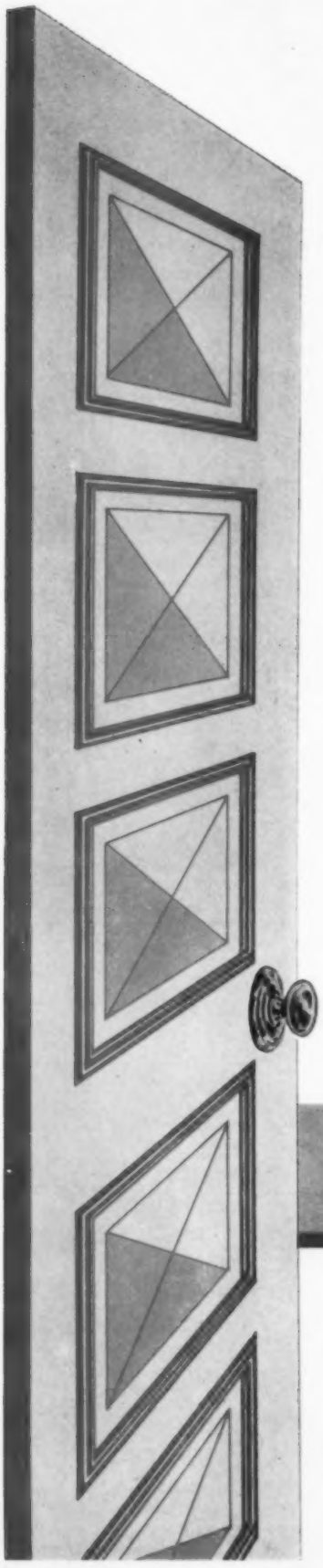
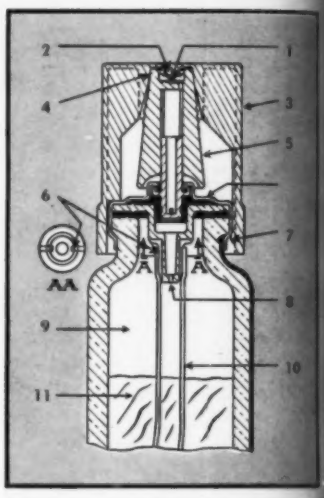


Risdon Research opens another door to new aerosol products

THE RISDON SEAL DOME SYSTEM*

For anti-perspirants containing aluminum salts and for other formulations containing elements which clog valve orifices.



1—Spray Orifice. 2—SEALING PROJECTION securely "corks" the spray orifice to prevent clogging due to drying out of aluminum salts. 3—Protective Dome. 4—Sealing Surface. 5—"Micro Mist"® Actuator. 6—Vapor Channel. 7—Retaining Nib. 8—Vapor-Liquid Mixing and Exit Orifice. "Vapor-Mix" produces finer, less "chilling" spray. 9—Vapor. 10—Dip Tube. 11—Liquid.

COMPLETELY NONMETALLIC VALVE — For 20mm glass, aluminum, stainless steel and plastic containers. Also available in 1" metal mounting cup.

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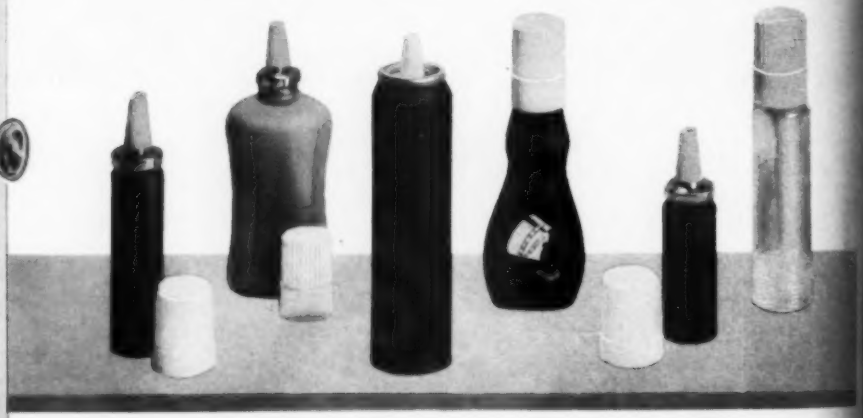

This is another example of Risdon's ability to produce successful solutions to present and future aerosol packaging problems. *For further information, contact Risdon.*

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